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MEASUREMENT OF PRE-ADOLESCENTS' VIEWS OF FAMILY CONTROL OF BEHAVIOR[1]

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Phenomenological personality theory is based upon the importance of determining how an individual views his world and how he reacts to these perceptions. Hawkes (2) has indicated the importance of applying this frame of reference to the study of interpersonal behavior in the family setting and has described a conceptual framework for research into family influences upon the personal and social development of children. One of the variables he cited was control of behavior. By control of behavior, reference is made to the physical and psychological guides and restrictions which the child perceives as being placed upon him by his parents and other family members.

Measurement of this variable was begun by Hawkes. He conducted extensive interviews with 10-year-old children and found that certain items were productive in obtaining responses about children's views of methods of control used by their parents and the children's evaluation of those methods. Upon the basis of this work, Lewis (4) developed a 56-item questionnaire. After some alterations made by Hawkes, a 58-item questionnaire, referred to hereafter as the Hawkes-Lewis or control scale, was included among the instruments used in a research project carried out in several midwestern states. The purpose of this article is to report the efforts that have been made to refine the Hawkes-Lewis scale.

THE SAMPLE

Since the same design used in this investigation has been described in other sources (1, 3), no detailed description of the sample design is given here. It should be noted, however, that fifth grade classes of children were used as a basis of sample selection. These classes were drawn from rural areas and small towns in Iowa, Ohio, Kansas, and Wisconsin during

[1] Published as Journal Paper No. J-3007 of the Iowa Agricultural Experiment Station, Ames, Iowa, Project No. 1171, Home Economics Research. Acknowledgment is due Leone Kell of the Kansas Agricultural Experiment Station, Ruth Hoeflin of the Ohio Agricultural Experiment Station, and Helen Dawe of the Wisconsin Agricultural Experiment Station for their collaboration in this regional research project.

the 1954-1955 school year. All the children present in those classes, 505 boys and 481 girls, completed the Hawkes-Lewis scale. A subsample of 256 children, 129 boys and 127 girls, was drawn from the larger sample. A detailed description of family characteristics of these children has been reported (3).

Scoring the Hawkes-Lewis Scale

Two methods were used to score the scale. One common method of scoring scales is arbitrarily to assign weights to responses in some numerical order, such as 1 to 5, referred to in this article as the judges' weights. But the sample design used in this study also permitted the development of a weighting system based on children's "typical" response selections. The responses of the 730 children not included in the subsample were used to derive a set of "typical" response weights to the items for scoring the scales completed by the subsample of children. Scores determined by this method are referred to as children's weights or scores.

The Judges' Weights

Thirteen competent judges were asked to rank the responses to each item along a continuum from response selections judged to be most conducive to healthful control of the children's behavior to those least healthful. A weight of one was used to indicate the latter response, a weight of five, to designate the former. The mean of the weightings given each response was calculated and the extent of agreement among judges estimated by the average deviation of the mean for each response. The mean average deviation was then determined for the three or five responses for each item. The values for the maximum and minimum degrees of disagreement provided a basis for assessing the actual range of agreement. When the distributions of item mean average deviations were inspected, it was found that the values for five items approached too closely the maximum value to warrant their use.

When the remaining items were inspected, it was noted that, while their weights had a mean average deviation within the limits defined for use, some items still possessed certain undesirable characteristics. For example, there were items with responses which had mean rankings which occurred as two pairs, 1, 3, 3, 4, 4, or three of a kind, 2, 3, 4, 4, 4. Only mean rankings with not more than one pair were tolerated; application of this criterion led to the deletion of 10 additional items. At this stage of evaluation, the scale as scored by judges' weights consisted of 43 items. For scoring the questionnaires by this method, the mean item responses were rounded to the nearest whole number.

The Children's Weights

Before developing the children's weights, differences in responses for boys and girls were tested. The 730 children in the larger sample were

classified by sex, and the number of boys and girls who chose each response for the 58 items was determined. Discrepancies in the frequency of boys' and girls' selections for each item were tested by chi square. Significant differences were found for eight items. For all the other items, the data from boys and girls were combined into a total sample.

The percentage of children (separately by sex for eight items) who checked the responses to each of the items was then calculated. These percentages were converted into single digit whole numbers (0, 1, 2, . . . 9). These weights were then assigned to the responses to the various items and were used to score the scales for the subsample of children. Since the weights were based on the relative frequency of selections of responses by a large number of children, the scores derived by this method may be thought of as a measure of the children's "typicality" of perception of control.

Reliability and Validity of the Two Forms of the Scale

An examination of the items comprising the scale indicated that the items might logically be grouped into several subscores. Therefore, 12 competent judges were asked to sort the items into one of three categories: (1) items relating to the child's view of control of his behavior (his report of limitations imposed upon him or conversely his degree of freedom of behavior within the family setting); (2) items pertaining to his reaction to what he reports; and (3) items which do not fit either of the former two categories. It was decided that at least two-thirds of the judges had to agree on the placement of an item for that item to be considered as part of the scale. Subscores were derived on the basis of the items in the first two categories.

The attempt to derive subscores led to the rejection of some items. The scale based on the children's weights was reduced to 47 items while 37 items were retained for the judges' form of the scale.[2] However, retesting of 49 children after an interval of one week revealed reliabilities for the subscores using children's weights of .69 and .73 and, for the scores based on judges' weights, reliabilities of .61 and .74. Total score reliabilities were .85 for each form of the scale. In view of the lower reliabilities of the subscores, it was decided to present only data based on the total scores for each form of the scale.

The validity of the scale can be considered in two ways. A case for the content validity of the scale can be made on the basis of the manner in which the items making up the scale were developed and screened by means of the judges' evaluations. Since all the children in the subsample also completed the Rogers Test of Personality Adjustment (6), there is

[2] Copies of each form of the scale with appropriate weights for responses may be obtained by writing to the authors. Some of the items will be discussed in a forthcoming paper.

a basis for inferring a type of concurrent validity for the Hawkes-Lewis scale. Four subscores, measures of children's feelings of personal inferiority, social maladjustment, family relationships, and daydreaming or fantasies, and a total score are obtained from the Rogers test.[3] Some association should be expected between the family relationship scores and the scores obtained on the two forms of the control scales. After correction for attenuation, these correlations were $r = -.40$ (control scores based on judges' weights) and $r = -.48$ (control scores based on children's weights). Both correlations were significant ($p < .01$) and both were negative or in the expected direction. High scores on the Rogers test indicate difficulty or maladjustment in relationships, while high scores on both forms of the control scale indicate perception of family control of behavior assumed to be desirable for sound personal and social development of children.

TABLE 1

SCORES ON EACH FORM OF THE CONTROL SCALE

		Children's Weights			Judges' Weights		
Sex	*Number*	*Range*	*M*	*SD*	*Range*	*M*	*SD*
Boys	129	78–199	166.7	20.6	77–165	133.8	13.9
Girls	127	112–202	173.9	20.0	99–162	136.6	12.3
Total	256	78–202	170.3	20.6	77–165	135.2	13.2

Findings and Discussion

The completed Hawkes-Lewis scales for the 256 children were scored on the usable items by each set of weights. The correlation between the scores derived by each method was .75. The scores obtained by the children's weights were based on 10 more items than the scores derived from the judges' weights; when these 10 items were deleted from the children's form of the scale, a correlation of .77 was found between the two sets of scores. After correction for attenuation, these correlations were .88 and .90, respectively.

Mean scores and related statistics as determined for each sex and for each form of the scale are shown in Table 1.

It was necessary to apply different weights for boys' and girls' responses to eight items on the control scale (as based on children's

[3] For definition of the subscores on the Rogers test, see Rogers (6, p. 8) or Remmers and Gage (5, pp. 354-356). Rogers defines the family relations score as measuring the amount of conflict and maladjustment which the child shows in his relations with his parents and siblings. Antagonisms toward parents, jealousies, feelings of being unwanted or dependence are also partially measured by this score.

weights). Hence, the possible ranges of scores for boys and girls were slightly different, from 44 to 221 points for the boys, from 40 to 227 points for the girls. The observed minimum score for the boys was lower, 78 as compared with 112 for the girls, but the maximum scores were similar, 199 and 202. The girls' mean was significantly higher by 7.2 points than the boys' mean on this form of the scale, but slightly different weights were used for boys' and girls' responses to eight items. These data indicate that for this form of the scale different means or norms should be considered for boys and girls.[4]

For the control scales based on judges' weights, the possible range of scores was from 37 to 175. The lowest weight per item was one; the highest weight was four on 10 items and five on the remaining 27 items. On this form, the observed minimum score for the boys was again lower than that for the girls, 77 as compared with 99, but the maximum scores were very similar, 162 and 165. In this case, the difference between the boys' and girls' means was not significant.

The distributions of the scores on both forms of the control scale are negatively skewed. It appears that most of the children studied perceived control of their behavior as nonthreatening or not unduly restrictive. The high mean scores on the judges' form support this view. It is encouraging to observe that most children apparently perceived home conditions relating to the control of their behavior as corresponding to those deemed desirable from a mental health point of view.

Summary

Efforts toward developing a scale for measuring children's perceptions of parental control of their behavior have been described in this article. An original self-administering scale of 58 items with forced choice responses was administered to 986 fifth grade children. Weights based on the frequency of response selections of 730 of these children were used to score the control scales completed by the remainder, a subsample of 256 children. The scale was also scored by a set of judges' weights. Statistical analysis of the judges' ranking of responses and attempts to derive subscores led to the elimination of some of the original 58 items. The final forms of the control scale included 47 items (based on children's weights) and 37 items (based on judges' weights).

Test-retest reliabilities, based on scores for 49 children after a one-week interval, were .85 for both forms of the scale. The validity of each form of the scale was considered in terms of (1) content validity or the manner of the development of the items and their scrutiny by several sets of judges;

[4] On six items, the maximum weight for the girls was one point higher than for the boys; on the other two items the maximum weights were the same although the weights were arranged slightly differently for the five responses.

and (2) concurrent validity or the correlation between the total scores on the two forms and the scores of the same children on the family relations dimension of the Rogers test of personality adjustment. These correlations, corrected for attenuation, were —.40 (judges' form) and —.48 (children's form).

A significant correlation of .75 was found between the scores derived from the 37-item form of the scale scored by judges' weights and those from the 47-item form scored by children's weights. When scores were determined by each method of weighting based on the 37 items common to both forms, the correlation was only slightly higher, $r = .77$. After correction for attenuation these two correlations were .88 and .90, respectively. These relationships were interpreted as indicating that most of the children studied reported perceptions of parental control of their behavior judged to be desirable from a mental health frame of reference.

Boys' and girls' mean scores based on the judges' weights were not significantly different. Girls scored significantly higher than boys on the form based on children's weights, presumably because different weights for boys and girls were employed for eight of the items making up the scale.

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PRE-ADOLESCENTS' VIEWS OF SOME OF THEIR RELATIONS WITH THEIR PARENTS[1]

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Previous research has indicated that boys, in various ways, tend to be more critical or less satisfied with their home conditions and their relations with their parents than girls (2, 4, 11). There is also evidence to support the hypothesis that children feel closer to their mothers or tend to rate their relationships with their mothers in a more favorable manner than similar relationships with their fathers (2, 4, 8, 11, 12). Data were recently gathered which permitted retesting these two sets of findings. While the studies referred to above were conducted with urban children or young adults, the present investigation was based on a sample of rural and small-town children. These data are given in the present report in the form of children's responses to some of the items included in the Hawkes-Lewis scale (6). Detailed descriptions of the sample design and methodology used in this investigation have been described elsewhere (1, 7). It should be noted that the sample included 730 fifth grade children from Iowa, Ohio, Kansas, and Wisconsin.

In the present report, the children's responses to various questions are organized to provide data in regard to three questions: (1) To what degree do children report that they are involved in family activities? (2) Are there any differences in boys' and girls' views of their relationships with their parents? (3) Are there any differences in the children's ratings of various characteristics of their mothers and fathers?

FINDINGS

Responses to eight questions, listed in abbreviated form in Table 1, may be considered as estimates of the children's views concerning their involvement in the activities of their families. In the order listed in Table 1

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these questions were: "How much do your parents discuss with you what your family is going to do?" "Does your family talk over plans together?" "How much do you help in choosing things to eat when you go to the grocery store with your parents?" "Do you help decide what clothes to buy for yourself?" "Are you praised when you do a job well at home?" "Are you thanked for doing little extra jobs at home?" "Do you have regular jobs to do at home?" "Do you think that you have too many jobs?"

Boys' and girls' responses to each question were tabulated separately, but, since none of the differences were significant, responses for the total sample of children are listed in Table 1. Variations in the number of responses in this table and subsequent tables are due to the failure of some children to answer some of the questions or the inappropriateness of a question for some children, e.g., where a parent was deceased or where a child had no siblings.

TABLE 1

CHILDREN'S RESPONSES TO QUESTIONS ABOUT THEIR INVOLVEMENT IN FAMILY ACTIVITIES

Questions	*N*	Responses (percentages)				
		Always	*Often*	*Sometimes*	*Seldom*	*Never*
Parents discuss with you	730	21	35	30	10	4
Family talks over plans	730	25	24	37	10	4
Choose things at store	730	9	22	40	20	9
Help decide what clothes to buy	730	18	26	40	10	6
Praised for doing a job well	730	25	25	35	10	5
Thanked for doing extra jobs	730	48	25	19	5	3
		Yes		*Usually*		*No*
Have regular jobs	728	72		18		10
Too many jobs at home	728	6		5		89

From the responses listed in Table 1, it is apparent that the children see themselves as involved in types of family decision-making activities and work about the house. They also reported that much more often than not their parents recognized their work efforts and thanked them for doing extra jobs.

Significant differences in boys' and girls' responses were found in relation to four questions listed in Table 2. These questions were: "How often do you talk over your plans with your mother?" "How much does your mother talk over with you the reasons why you are punished?" "Are your parents too strict with you?" "Are your parents more strict with you than

TABLE 2

BOYS' AND GIRLS' RESPONSES TO QUESTIONS ABOUT RELATIONS WITH THEIR PARENTS

Questions	N	Responses (percentages)					C Test of Difference
		Great deal or always	*Much or often*	*Some or sometimes*	*Little or seldom*	*None or never*	
Talk over plans with mothers							
Boys	368	22	27	30	17	4	
Girls	352	39	28	21	9	3	5.152**
Mothers talk over reasons for punishment							
Boys	368	16	29	26	21	8	
Girls	351	22	27	29	13	9	1.630*
		Yes		*Usually*		*No*	
Parents too strict with you							
Boys	374	6		11		83	
Girls	355	5		6		89	2.012*
Parents more strict with you than other children							
Boys	344	12		20		68	
Girls	316	8		11		81	3.394**

* Significant at the 5 per cent level.
** Significant at the 1 per cent level.

with other children in your family?" For these statistical tests and those in subsequent tables, Marshall's *C* was employed (3, pp. 553-555; 10).

Two inferences appear warranted on the basis of the percentages listed in Table 2. First, the vast majority of boys and girls reported that they "always," "often," or at least "sometimes" talked over their plans with their mothers. It was also apparent that, in the view of the majority of the children, mothers were much more likely than not to talk over with them the reasons why they were punished. Only a small proportion of the children reported that their parents were too strict with them or stricter with them than other children in their families. However, it also was clear that boys felt their parents were stricter with them than did girls. Girls reported that they talked over their plans with their mothers more than did boys. Girls also felt that their mothers talked over reasons for punishment more than did boys. Differences in boys' and girls' responses for frequency of talking over plans with their fathers or the degree to which fathers talked

over the reasons why they were being punished were not significant. These percentages are listed in Table 3.

In addition to observing possible differences in boys' and girls' responses to various questions, it was also possible to test differences in the children's responses to identical questions pertaining separately to their mothers and fathers. It already has been noted that for two questions related to mothers, statistically significant differences were found between boys' and girls'

TABLE 3

BOYS' AND GIRLS' RESPONSES TO QUESTIONS ABOUT THEIR RELATIONS WITH THEIR MOTHERS AND FATHERS

		RESPONSES (PERCENTAGES)					
Questions	*N*	*Great deal or always*	*Much or often*	*Some or sometimes*	*Little or seldom*	*None or never*	*C Test of Difference*
Boys: talk over plans with							
Mothers ...	369	22	27	30	17	4	
Fathers	369	23	24	26	19	8	4.029**
Girls: talk over plans with							
Mothers ...	343	38	29	21	9	3	
Fathers	343	21	17	29	23	10	7.794**
Boys: talk over reasons for punishment							
Mothers ...	360	16	28	27	21	8	
Fathers	360	14	25	28	21	12	1.749*
Girls: talk over reasons for punishment							
Mothers ...	342	22	27	29	13	9	
Fathers	342	15	25	28	19	13	3.070**

* Significant at the 5 per cent level.
** Significant at the 1 per cent level.

responses. Therefore, boys' and girls' responses were kept separate for comparing the responses of the children to these questions pertaining to each of their parents. Only those children who answered the questions for both parents have been included in these analyses and, hence, the numbers in Table 3 are slightly lower than those reported in the other tables.

An interesting feature about the percentages listed in Table 3 is that mothers were uniformly rated more favorably by the children than fathers. Boys reported that they talked over their plans slightly more with their mothers than fathers. Boys also reported that their mothers were slightly

more likely to talk over the reasons for their punishment than were their fathers. The girls' responses were in agreement with the patterns described for the boys, but the differences in the ratings for mothers and fathers were much larger than observed for the boys. It should be noted that both boys and girls tended to choose the "always" and "often" responses more frequently than the "sometimes" or the "seldom" and "never" responses for all the questions. Hence, both parents were rated favorably, but mothers more so than fathers.

Responses for five other questions that were repeated for each parent are listed in abbreviated form in Table 4. Since the discrepancies in boys' and girls' responses to these questions were not significantly different, percentages for the total sample of children are listed. These questions were: "Does your mother keep her promises with you?" "Does coaxing help you to get your mother to change her mind?" "Are you punished when you

TABLE 4

CHILDREN'S RESPONSES TO QUESTIONS ABOUT THEIR RELATIONS WITH THEIR MOTHERS AND FATHERS

		RESPONSES (PERCENTAGES)					
Questions	*N*	*Great deal or always*	*Much or often*	*Some or sometimes*	*Little or seldom*	*None or never*	*C Test of Difference*
Keeps promises with you							
Mother	719	54	23	18	4	1	
Father	713	48	26	18	5	3	.167
Coaxing changes their minds							
Mother	717	5	14	43	23	15	
Father	714	5	12	35	27	21	3.134**
Are you punished for disobeying your							
Mother	721	17	23	41	13	6	
Father	716	20	23	36	13	8	.304
Gets angry when punishes you							
Mother	718	10	18	42	22	8	
Father	713	11	17	39	21	12	.423
		Yes		*Usually*		*No*	
Easy to get along with							
Mother	719	74		21		5	
Father	716	67		25		8	3.347**

** Significant at the 1 per cent level.

disobey your mother?" "Does your mother get angry when she has to punish you?" "Is your mother easy to get along with?" Identical questions were repeated for fathers.

While mothers were rated as "easier to get along with" than fathers, only a very small proportion of the children said that either their mothers or fathers were not "easy to get along with." About three-fourths of the children indicated that their mothers or fathers were "easy to get along with." Apparently coaxing was more successful with mothers than with fathers, but only 19 per cent of the children indicated that coaxing "always" or "often" resulted in getting their mothers to change their minds. Seventeen per cent of the children checked similar categories for the same questions about their fathers. The children's responses indicated that mothers and fathers were about equally likely or unlikely to keep their promises with them, punish them for disobeying, or become angry while punishing them. Only about one-fifth of the children indicated that they were "seldom" or "never" punished for disobeying their parents. Almost three-fourths of the children reported that their mothers and fathers "always" or "often" kept their promises with them and only small percentages of the children, 5 per cent for mothers and 8 per cent for fathers, checked "seldom" or "never" for these questions. When the children were asked about the frequency with which the parents expressed anger while punishing them, the modal response was "sometimes" for both fathers and mothers.

When the results of Tables 3 and 4 are combined, it appears that the children, as a group, report fairly satisfactory relations with their parents, but that mothers are rated in a slightly more favorable manner than fathers.

Summary

A sample of 730 fifth-grade children responded to a number of questions about their involvement in family activities, treatment in their homes, and relations with their parents. At the risk of overgeneralizing, several inferences may be drawn from the reports obtained from the children. For the most part, the children chose responses which indicated that they were involved to a considerable degree in family activities, and were reasonably well satisfied with their treatment in their homes and with their relations with their parents. Data from the four tables included in this report furnish the basis for this statement. Boys' and girls' responses listed in Table 2, however, indicated that boys as compared with girls reported less satisfactory relations with their parents. These results are in agreement with the findings of other researchers who found that boys were less satisfied with or more critical of their relations with their parents than girls (2, 4, 11).

Although the children gave favorable ratings to both of their parents for questions pertaining to a number of characteristics of the parents,

mothers were seen in a more favorable manner for some characteristics by both boys and girls. Other researchers have also found that children tend to feel closer to their mothers or rate their mothers more favorably for various characteristics in comparison with their fathers (2, 4, 8, 11, 12).

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CHILDREN'S ATTITUDES TOWARD PEERS AND PARENTS AS REVEALED BY SENTENCE COMPLETIONS

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Students of child behavior generally believe that a child builds attachments to his parents as a result of their ministrations to him, and that he builds favorable attachments to other children in terms of pleasant and reinforcing experiences had with them. Observational studies of social behavior have sketched some detail within this general picture. Young children play together freely and select best friends regardless of sex. As children grow older there arises an increasing tendency to regard with favor one's own sex peers and with disdain, if not enmity, members of the opposite sex. This trend breaks down only during adolescence when both biological drives and the social setting favor heterosexuality. This period of increasing interest in and association with members of the opposite sex merges with the period of courtship and mate selection which society has institutionalized in various ways.

Along with the growing interest in the peer group and as the child develops skills and independence, there is a waning of interest in the parent figures. This is said to be particularly noticeable in early adolescence, when a period of antagonism or, indeed, outright conflict with parents occurs. This conflict is resolved by parents readjusting their expectations of the children and according more freedom. Evidence from various studies asking children to name their preferred parent or best friend has been

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used to support these trends. Such methodology has been criticized as too direct, yielding only socially approved results.

Theoretically, these phenomena have been explanied by psychoanalysis in terms of cathection of the libido, and by learning theorists in terms of secondary drives built upon physiological appetites and extended by a process of conditioning to many persons in the environment. By modification of this latter viewpoint, changes in pattern of the child's affective attachments to others are represented as a complex process, in which the child's "role" as perceived by himself and by others modifies with his increasing maturity. Consequently his attachments to others reflect this changing "role." Data accumulated by a sentence completion test given to some 3000 children from the third grade through high school[2] yield some interesting observations on this general picture of social development.

Procedure

From a series of 32 sentences first developed by Wilson (9), some 10 sentences were selected by an empirical procedure for inclusion in a battery of instruments designed to assess general adjustment (2). These sentences were "scored" by the simple expedient of evaluating the completions in terms of the positive, negative, or neutral affect of the response. Using a guide list of typical responses, scorers independently classifying responses attained the agreement expressed by correlation coefficients of +.89 to +.96 in several check samples.

Four sentences evoked attitudes toward parents and toward other children. These sentences were "Most boys _____," "Most girls _____," "My father _____," and "My mother _____."

This method of analysis makes no particular "projective" assumptions about hidden affect in sentence completions. Rather, the manifest affect as conveyed by the vernacular is taken as the basis for inferring "positive," "negative," or "neutral" attitudes. However, the technique is indirect; the sentences do not expressly call for an attitude toward parents or toward peers. These sentences, furthermore, are embedded among other sentences referring to school and to other common childhood experiences.

The items "Most boys _____," and "Most girls _____," can be treated as follows: A child may answer both items positively; an example would be "Most boys are nice," and "Most girls are pretty." He might answer both items negatively, as "Most boys are mean," and "Most girls are dumb." He can answer the items in such a way as to be neutral in both: "Most

[2] The total school population, public and parochial, in grades 3 through 12 of a county seat town of 8000 in rural Minnesota is included in this analysis. Grade groups ranged in size from 221 in the fourth grade to 123 in the tenth grade and were about evenly divided as to sex. The test was given as one item in a comprehensive program which included 12 instruments.

boys are tall," and "Most girls go to school." A child may answer an item positively for boys, but neutrally for girls, such as "Most boys are nice," and "Most girls are small." For any child there are nine possibilities with respect to completing the two sentences.

A child may answer the item referring to parents positively for both, for example: "My mother is the best mother in the world," and "My father is the best father in the world." He may answer them negatively, as "My mother yells at me," "My father is mean." A child may answer both items neutrally, as "My mother is a housewife," "My father is a farmer." He may answer neutrally for his mother but positively for father, "My mother is a teacher," "My father is a wonderful man." His responses may be negative for mother but positive for father, as: "My mother scolds me," and "My father is a nice guy" and so on for the nine various combinations of the three grades of responses to both sentences. It is clear that for a particular child a so-called "neutral" response might have positive or negative affect; we are limiting our interpretation to the usual semantic value of the words used.

Results

By combining percentages of boys and girls in each school grade who give responses of a particular affect classification, it is possible to draw curves expressing certain trends in attitude change. Figure 1 depicts boys' attitudes toward other boys and girls. In this figure are plotted the per-

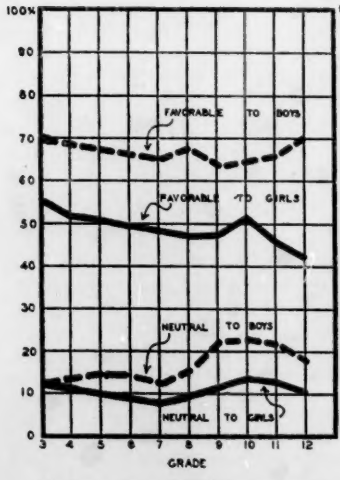

FIGURE 1—Boys' attitudes toward peers

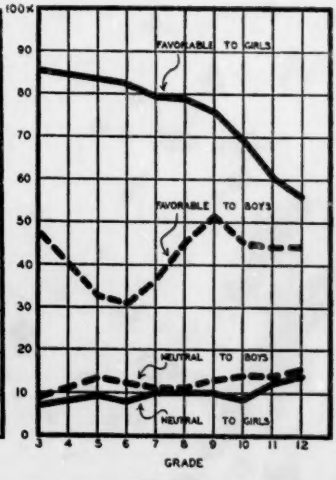

FIGURE 2—Girls' attitudes toward peers

centage of responses positive or "favorable" to other boys and to girls,[3] smoothed by the three-point moving average method. Similar data are plotted for neutral attitudes. Curves showing negative or "unfavorable" responses are omitted because their plots complicate the graph visually, and their character is fully determined by the data shown in the favorable and neutral curves. Figure 2 shows girls' attitudes toward other girls and boys.

Figure 3 reports curves redrawn from Figures 1 and 2 to compare like-sex attitudes. Boys' positive responses toward boys are compared with girls' positive responses toward girls. On this chart negative responses are also plotted, neutral responses being omitted for sake of simplicity. Similarly, Figure 4 depicts cross-sex attitudes by plotting boys' *positive* responses toward girls and girls' *positive* responses toward boys. Negative responses are not plotted because the points would fall close to the percentage points for favorable categories and would complicate the diagram.

The figures speak for themselves but a few comments may be in order. Approximately 65 to 70 per cent of the boys give positive responses to other boys at all grade levels. Boys are more positive to boys than to girls in all grades. In general, taking into account the proportion of neutral attitudes, boys in the intermediate grades are more favorably than unfavorably disposed to girls, judged by the affect tone of their sentence completions. By grade 8, about the same proportion of boys give favorable as give unfavorable responses to girls. Indeed, this general decline in favorable or positive attitude toward girls is counteracted only slightly in the tenth grade, and continues noticeably thereafter. This finding does not bear out the general expectation of boys' heterosexual attitudes in adolescence. It may be that, for older adolescent boys, a positive attitude toward girls is limited to *particular* girls. At any rate, there appears to be a fair proportion of boys throughout adolescence who give a negative completion to the general stimulus "Most girls ——."

A noteworthy trend in girls' attitudes is the noticeable increase in negative responses to other girls following the ninth grade. Perhaps this change expresses an increased competitiveness among females in the adolescent years! Paralleling this trend is the slight but noticeable increase in number of boys showing neutral attitudes toward other boys in the high school years. Perhaps girls personalize their feelings more toward their own sex in adolescence, while boys shift more toward neutrality, and do not move into negative feelings.

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[3] To the percentage of boys giving favorable responses to both boys and girls are added the percentage of boys giving favorable responses to boys but neutral responses to girls, plus the percentage giving favorable responses to boys but unfavorable to girls. Data for the curve, "Neutral responses to boys" were obtained by combining the percentage of boys giving a neutral response to both boys and girls with the percentage giving a neutral response to boys but unfavorable to girls, and the percentage giving a neutral response to boys but favorable to girls. Similar combinations of percentages were made for Figures 2, 3, and 4.

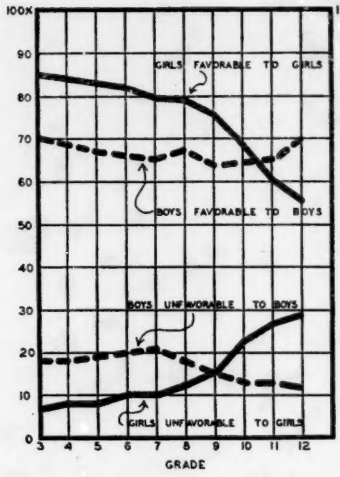

FIGURE 3—Attitudes toward peers of like sex

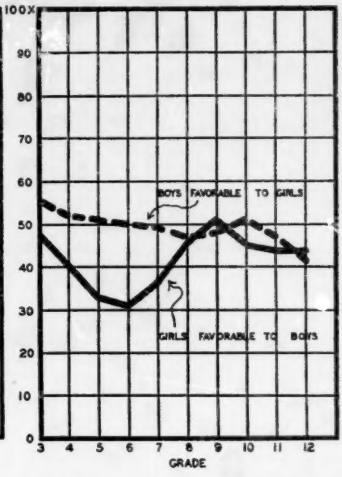

FIGURE 4*a*—Attitudes toward opposite sex

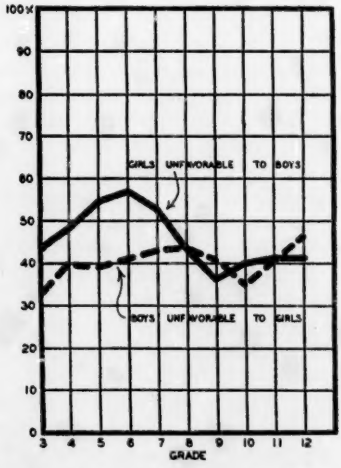

FIGURE 4*b*—Attitudes toward opposite sex

In general, there is a falling off in favorable responses extended peers as children grow older; this trend is partly accounted for by an increase in neutral responses. Only in girls is there evidence for an increase of negative response, and these are directed toward their own sex.

Both boys and girls give a large number of favorable responses to their own sex, with girls being more favorable to girls in general than boys are to boys, except in the late high school years. In general, both unfavorable and neutral responses given to the same sex are small, never exceeding 30 per cent, and involving usually between 10 and 20 per cent of children in all grade groups. Below grade 9 boys give noticeably more negative responses to other boys than girls give negative responses to other girls. Possibly the rough and tumble to which boys of this age are prone is not enjoyed by a fair portion of the group. Or possibly a percentage have "interiorized" the social disapproval often visited on the social behavior of boys in this age group.

When cross-sex attitudes are compared, it is interesting to note that more boys are favorable to girls in the intermediate grades than the proportion of girls which express themselves as favorable to boys. This difference increases through the intermediate grades, reaching a maximum around grade 6; then the curves tend to come back together. The suggestion is that the boy-girl antipathy in the intermediate grades is more a product of girls changing their attitudes toward boys than it is of boys changing their attitudes toward girls. The impatience of girls aged 10 to 12 with the boisterous conduct of boys is a familiar phenomenon in any family or school room.

These data strongly suggest that girls, in general, are more "emotional" in their attiudes toward peers than are boys. Despite their changing attitudes, girls generally give more positive responses than boys. Generally speaking, boys extend more neutral attitudes than girls. Both sexes give more negative responses to opposite sex than to own sex, and the difference is particularly noticeable in girls. The proportions of negative responses given by either sex to other children (boys and girls combined) are approximately the same. These percentages tend to be under 10 or 15 per cent.

There are not many other studies of peer attitudes which are comparable. Studies of friendships cast little light on children's favorableness or unfavorableness toward other children in general. Koch's study (4), which obtained preference choices by the paired-comparison method from each child in a number of grades, comes closest to giving comparable material. By limiting her analyses to frequency of preference choice in opposite sex pairs of names which did not include the judge but compared all other children in his room, Koch found that the members of each sex in all grades and usually even at the high school level were inclined to show a preference for their own sex. This "distance between the sexes" tended to increase with grade or age and then to decrease, the trend being conspicuous in high school. Her data also suggest that girls' preference for girls in the

lower grades exceeds boys' preference for boys, but that this relative position is decreased and even reversed in the tenth and twelfth grades where boys are more likely to prefer boys than girls are to prefer girls.

All these findings are substantially in agreement with our own evidence, obtained by a very different method. In commenting on the decline in girls' preference for girls in bi-sex pairs of names in high school, Koch wonders whether older boys and men ultimately reduce their bias in favor of their own sex, as women do. The data of this study, using a quite different method, suggest that this "reduction of bias toward own sex" actually may be characterized in girls as an increase in negative attitude rather than as an increase in neutral attitude. This study, of course, sheds no light on Koch's speculation concerning men. Koch also suggests from indirect evidence in her data that there may be "more hostility to boys in the sex bias of girls than loyalty to girls." Our method, which evaluates the elicited affect toward the other sex in general, supports this conjecture, insofar as attitudes toward boys are concerned. Although Koch believes "girls reject boys more than girls prefer girls," our data do not show that the percentage of girls showing unfavorable affect toward boys ever approximates the proportion expressing favorable attitudes to other girls.

Campbell's study of social-sex attitudes (3) in children was based on observations of same-sex and cross-sex contact in a coeducational club program. Actual contacts were not counted; rather, the character and quality of contacts were described in a systematic, but general manner for each child participating. Her descriptions of typical patterns of behavior support the general finding of like-sex preference in the grades, with girls showing a shift toward greater interest in boys by mid-teens, somewhat sooner than a comparable shift occurs in boys. She notes no behavior which would reflect the sharp increase we found in girls' unfavorable attitudes toward boys in the fifth, sixth, and seventh grades, nor the decline in favorable attitudes toward other girls in the high school years. Campbell records no behavior in boys which is inconsistent with the data of this study. Of the 14- to 17-year-old boy, she states that he "shys away from girls in a group but may be less shy when only one girl is to be considered." This observation is perhaps not incompatible with the data in Figure 1.

The data of our study are congruent with other findings, though not perhaps with the impression that boys go through an anti-girl phase in the elementary grades, followed by an increasing interest in girls in general in high school. This cycle of events does appear to characterize girls. Boys change their affect less as they grow older and incline more than girls to neutral attitudes in peer relationships. In general, children are cordial rather than antipathetic or neutral in their attitudes toward peers.

Figure 5 depicts boys' positively toned responses toward mother and father. Negatively toned responses are also plotted, but not "neutral" responses, which constitute a generous proportion. Figure 6 gives similar data for girls' attitudes toward mothers and fathers. Figure 7 shows the

percentage of children expressing preference for mother, or liking parents equally well.[4]

Young boys are more favorable to their mothers than to their fathers, and the sharp drop in favorableness to both parents between grades 3 and 5 is noteworthy. Neutral attitudes toward both father and mother rise sharply from grades 3 to 4 and remain largely unchanged until late high school years, when there is some shift back toward positive attitudes. Unfavorable attitudes toward parents remain close to 5 per cent in all samples. Young girls also show a sharp drop in favorable responses toward both parents between grades 3 and 5, with a corresponding rise in neutral attitudes. In both boys and girls there appears to be a shift away from the young child's uncritical fondness for parents to a more objective judgment which expresses itself in the greater proportion of neutrally toned, matter-of-fact completions. Unfavorable responses for girls, as for boys, constitute about 5 per cent or less for both father and mother, but girls' unfavorable responses, unlike boys', tend to rise slightly after about grade eight.

When we infer attitudes from sentence completions, we find no evidence for hostility to parents in early or mid-adolescence. Such feeling, if it occurs in many young people, either does not find expression in sentence completions or is so variously placed in the teen years and of such short duration that it cannot appear in cross-sectional data. The percentages of boys and girls giving negative responses to either parent are very similar and uniformly small. In these, as in the previous figures, the greater "neutrality" of the male appears.

Figure 7 shows that, in general, boys and girls in about the same proportion prefer the mother, between 20 and 30 per cent of preference choices being given to her. There is, perhaps, a slight increase in girls' preference for mother from grades 3 to 7, but no particular change in boys' preference for her. About the same proportions of boys and of girls prefer the father, the values tending to remain under 10 per cent at all grade levels. There is a very slight trend for more girls in the adolescent years to express a preference for fathers.

More girls than boys report equally favorable attitudes toward both parents at all ages except the twelfth grade, but the differences are cer-

[4] The percentage of children preferring the father was obtained in each grade group by combining the percentage giving a neutral response to mother but a favorable response to father with the percentage giving an unfavorable response to mother, but a neutral response to father, and with the percentage giving an unfavorable response to mother, but a favorable response to father. In every case the affect tone of the completion to the stimulus "My father——" was relatively more favorable than the affect tone given by the completion of the stimulus "My mother ——." The percentage "Like equally well" is found in Figure 7 by plotting only those giving a *favorable response to both*. The small percentage of children giving an unfavorable response to both parents (never over 4 per cent in any grade group) is omitted, as well as the fairly high percentage of responses which are neutral to both parents (this runs roughly between 25 and 35 per cent for most grade groups), even though both of these groups in a sense may be said to like their parents "equally well."

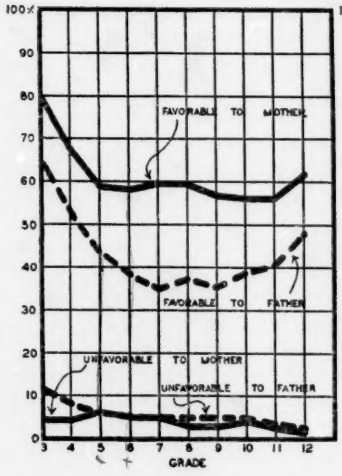

FIGURE 5—Boys' attitudes toward parents

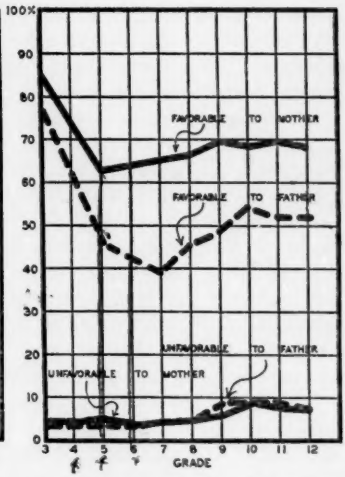

FIGURE 6—Girls' attitudes toward parents

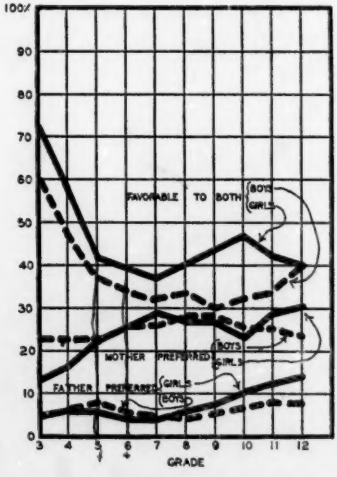

FIGURE 7—Children's parent preferences

tainly not striking. The sharp decline from the third to the fifth grade is of some interest. This study begins at the third grade, apparently toward the end of a period in which children give equally to both parents general, undiscriminating and positive attitudes. This trend coincides with and expresses the movement toward a greater proportion of neutrally toned responses noted in Figures 5 and 6.

These findings agree in general with results of other studies. Using a combination of the picture-story method, questions about preferential treatment at home, and a direct question about whom the child liked best at home, Simpson (7) concluded that between ages five and nine, boys and girls alike show a decreasing preference for their fathers, with a very slight increase in the percentage favoring mothers. There was a pronounced increase up to age nine in the proportion of children stating that they "prefer both," which may be compared with the decreasing proportion reporting positive attitudes to both parents in the present study. Anderson (1) in the White House Conference report of 1936 showed that by the mothers' report a majority of children expressed no preference between their parents, and that of those who did, the larger group favored the mother. The percentages for these attitudes changed very little with age. Likewise, Meltzer (5), Stogdill (8), and Mott (6) found mothers more likely than fathers to be designated the favorite parent at all ages. None of these studies showed any trend comparable to the upswing in positive attitude toward parents during mid-adolescence which appears, particularly for boys, in the present study. These data offer a picture of increasing objectivity in later childhood, in part expressed by the increased proportion of children (particularly of boys) who use neutral expressions in their sentence completions, both towards peers and parents.

Summary

A sentence completion technique, used to infer attitudes toward peers and parents, leads to the following conclusions:

1. Boys and girls are predominantly favorable to their peers, and at every age positive attitudes to own sex peers exceed those to opposite sex peers.

2. Boys somewhat more than girls express neutral attitudes. Girls clearly express more negative attitudes to their own sex as they grow older.

3. The so-called boy-girl antipathy of the intermediate grades is more a product of girls changing their attitudes toward boys than vice-versa. Boys show a slight over-all decrease in favorable attitudes toward girls, even in the later high school years.

4. Toward both mother and father, boys and girls extend more favorable than unfavorable attitudes, though there is a noticeable increase in neutral affect in the intermediate grades. Both sexes extend positive attitudes more frequently to mother than to father.

5. Boys in high school years show a slight rise in positive attitudes toward each parent; girls show a more pronounced increase in positive attitude toward father than toward mother in these same years.

6. The small proportions of boys showing negative attitudes toward mother and/or father decrease steadily through childhood and adolescence. The correspondingly small proportions of girls showing negative attitudes increase steadily through childhood and adolescence.

7. When a difference exists in the attitudes a boy or girl extends to his parents, he or she more often prefers the mother than the father. A larger group, however, extends similar (and positive) attitudes to both parents. There is a slight rise in girls' preference for father during the high school years.

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RELATIONSHIPS BETWEEN DEPENDENCE ON ADULTS AND SOCIAL ACCEPTANCE BY PEERS

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The belief is widely held by those responsible for guidance of children that extreme dependence upon adults in a nursery school situation indicates that the child has not had his needs met for satisfaction in contacts with adults, particularly his parents. It is also commonly assumed that a warm and satisfactorily dependent relationship with adults (particularly parents) must exist before a child can be secure enough to gain emotional satisfaction from social competence with and acceptance by peers. Sears' (7) position provides some support for these points of view. He has thought of extreme preschool-aged dependency as being possibly due to weaning and feeding frustration in infancy, these having aroused anxiety associated with adults so that adult controlling and manipulating behavior is essential to the child's emotional economy. Dependency is the expression of this controlling behavior.

The opinion is seldom advanced that adult dependency in preschool situations may be due to lack of techniques for relating with peers, without other dynamic determinants. Rarely expressed also is the opinion that exteremely gratifying parents may develop habits of dependency in their children (probably reinforced by the same kind of teachers), thus perhaps reducing or precluding the possibility that the children can find equivalent satisfaction with their peers.

To the authors' knowledge, it has not been established empirically that any relationship, positive or negative, exists between dependence on adults and competence with peers, including acceptance by them. While Heathers (1) has studied relations between preschool children's dependence on teachers and their types of play with peers, he has not dealt with social acceptance as such, and its relationship with dependency. One investigation deals with this subject indirectly: McCollum (4) reported that a teacher's rating

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of "mature dependency" and sociometric status were related positively to a test of creativity for four- and five-year-old children.

The authors have reported a technique for eliciting sociometric choices from preschool aged children, using pictures (3), that is both reliable and useful. They have also revised the Hyde and York (2) "moving sociometric techinque" of observation so as to be able relatively quickly to gain reliable quantitative data on adult-child and peer social interactions in a nursery school free play situation (5).

Using the observed number of adult-child interactions as the measure of dependency, this paper asks two questions: (1) Is the degree of preschool children's dependency on adults in free play situations related to their participation with and acceptance by peers? (2) If such a relationship is found, is it affected by the progress of acquaintance in a preschool group from its inception through time?

Subjects and Procedures

Ss constituted two groups in the Laboratory Preschools of the University of Iowa's Child Welfare Research Station. Children were selected for these groups and teachers assigned by regular Station procedures, independently of the present authors. Fathers of all children were engaged in professional or business-managerial occupations. It was the first Station preschool experience for the majority of the children in each group, although three children were members of both groups. One boy of these three was absent from school too often in Group I to be used as an *S*, leaving 10 girls and nine boys in Group I (I). School absence also eliminated a girl in Group II (II), leaving as *Ss* nine girls and 10 boys. Mean CA at the time of beginning observations for I was 4-4 years; II averaged 4-11 years at the beginning of the first of two play observation series (IIA). The two groups were combined into a single sample of 36 *Ss* for the correlations listed in Table 1 of this paper, and for these, Group II records and tests were used for the three children belonging to both groups. There was no teacher overlap between groups, and each group was staffed with an experienced head teacher and two graduate teaching assistants. Interactions with other adults (e.g., the present investigators, student observers, graduate assistants, parents) are included in the dependency measures.

Peers and child-adult interactions were recorded in similar fashion by a modification of the Hyde-York (2) observation technique, as described more fully in another paper (1). The interactions were recorded for two-minute periods in the following categories for both peer and child-adult interactions: (a) Association: apparent mutual awareness of a common activity or interest, and as further defined by Parten (6). (b) Friendly approach or response that is neutral, pleasant, friendly, or helpful. It may be limited to one word or include many words. (c) Conversation: *Ss* converse in a friendly fashion for one-half minute or more of the two-minute obser-

vation time (used for II only). (d) Hostile: verbal or physical approach or response that interferes with the on-going activity of the *S*, is a direct attack, or is judged deliberate "snubbing" withdrawal from some approach of the child or adult.

An adult dependency score was obtained for each child by adding the observed incidence of adult-child interactions, by category or combinations of categories (as indicated in Tables 1 and 2), and dividing this sum by the total number of minutes of observation for the child.

For *Ss* in I, a minimum of 100 minutes of observation per child was obtained over one calendar month. At least 200 minutes of observation—two 100-minute series designated as IIA (earlier) and IIB (later)—were recorded for each *S* of II over six calendar weeks. In all observations, *Ss* were in indoor and outdoor free play situations offering a wide variety of companions and activities. All preschool hours and activities were included in the observations except situations where spontaneous social interactions between children were not encouraged or could not develop, such as listening to stories, resting, juice service or dressing.

Odd-even sampling reliability of dependency scores was computed only for the friendly approach category and its combinations, since zero scores were obtained in the split halves of other categories for many *Ss*. Odd-even split-half dependency scores for this category and its combinations in IIA had Guttman coefficients of .69 to .72. Sampling reliability over time was computed for two different split-halves. The two 100-minute series of II had the following Guttman coefficients for dependency scores: friendly approach, .65; conversation (for the 14 *Ss* with scores), .84; association plus friendly approach, .74; association plus friendly approach plus conversation, .77. However, in the split of the first and second 50-minute scores of IIA, friendly approach dependency scores had a Guttman coefficient of only .16. Sampling reliability of dependency scores, then, is low to moderate, where high sampling reliability was obtained for peer interaction scores. These latter ranged from .80 to .95 in all splits of observation records (5).

Four measures of peer social acceptance and participation were used in this investigation: (a) Sociometric score, obtained from verbal choices of *Ss* (3). The scores in Table 1 were obtained from choices during the fourth of a series of four test periods for I and the third of three for II. (b) Teacher judgment (of social status) score (3). The score used in Table 1 was obtained from judgments of teachers made at the same time that the sociometric choices were obtained. (c) Observed social acceptance score (5), or, roughly, the sum of the number of children for whom the *S* was observed to be one of the three peers played with most frequently in I and IIB records. (d) Peer interaction score for single and combined categories of observed interaction. Limited to social interactions with other children, this score was obtained in the same way (5) as the dependency score and is a measure of degree and kind of social participation with peers. For Table 1 analyses, scores from observation records of I and IIB were used.

Results

1. Is the degree of preschool children's dependency on adults in free play situations related to measures of social acceptance by and interaction with peers?

Table 1 gives product-moment and biserial correlation coefficients obtained between dependency scores and measures of social acceptance and

Table 1

CORRELATION COEFFICIENTS FOR ADULT DEPENDENCY SCORES AND PEER ACCEPTANCE OR PARTICIPATION SCORES FOR SAMPLE OF 36 *Ss*

	ADULT DEPENDENCY SCORES‡				
	A		FA	A+FA	H
Peer Acceptance or Participation Scores	r_{bis}	r†	r	r	r_{bis}§
Sociometric Scores	—.59*	—.27	—.26	—.32	—.51*
Teacher Judgment Scores	—.50*	—.21	—.39*	—.40*	—.23
Observed Social Acceptance Scores	—.13	—.25	—.49**	—.45**	—.09
Peer Interaction Scores:‡					
A	—.40	—.23	—.42*	—.45**	—.15
FA	—.54*	—.37	—.64**	—.67**	—.24
H	—.09	.16	—.11	—.07	.19
A + FA	—.50*	—.32	—.56**	—.59**	—.21

* r or r_{bis} is significant at $< .05$ level.

** r is significant at $< .01$ level.

† $N = 30$.

‡ Observation category letters are abbreviations for names of the categories, as follows: A = Association; FA = Friendly Approach; H = Hostile.

§ 11 *Ss* had zero scores in the hostile "dependency" category.

participation for the sample of 36 *Ss*. All but two of the 35 coefficients are negative, 15 of them being significant at the $p = .05$ or less level. When the same correlations were computed for each group separately, a similar consistency in negative direction and size of coefficients was obtained for both I and IIB. The consistency of direction and frequency of significance of these relationships indicates that dependence on adults in the preschool situation accompanies relatively low social status and group participation.

The practical importance of the significant negative correlations between dependency and the categories of association (A) and friendly approach (FA) is pointed up when it is noted that A + FA make up 86 per cent of all the observed peer social interactions of these children, A composing 36 per cent, FA 50 per cent.

The negative relation between children's sociometric scores and dependency scores differed significantly from zero for the biserial coefficients of association and hostile dependency scores, as shown in Table 1. All de-

pendency scores except those for the hostile category correlated negatively and significantly with teacher judgments of social status. Observed social acceptance scores correlated significantly with dependency scores in the friendly approach category and the additive combination of categories. In general, then, negative relations were found to exist between dependency scores and each of these three measures of social acceptance obtained after several weeks of acquaintance.

The negative relationship between dependency scores and degree of social participation with peers was most marked for the correlations of the friendly approach category peer interaction scores. This category of peer interaction scores was related negatively and significantly to all dependency scores except those of the hostile category. The product-moment r's were the largest in size of any obtained for the total sample. For the friendly approach dependency scores, the r obtained with the same category of peer interaction scores differed significantly from the r's obtained with association (.02 level) and hostile (.01 level) peer interaction scores. Hostile peer interaction scores appear to be unrelated to either friendly or hostile dependence on adults.

The conversation category of interactions with adults was recorded only in observations for II. In IIB, conversation dependency scores correlated negatively and significantly with friendly approach ($r = -.50$) and A + FA ($r = -.49$) peer interaction scores. However, the correlations with the three measures of social acceptance were not significant (r's $= -.39$ to $-.45$). Conversation peer interaction scores correlated significantly with association dependency scores ($r_{bis} = -.52$) and with the combination dependency scores ($r = -.52$).

2. Is there any indication that the degree of a child's dependence on adults and its relation to other scores change as acquaintance progresses in a newly formed preschool group?

The 100 minutes of observation records of series IIA were collected for the 19 *Ss* in the initial three to four weeks of the group's existence. The product-moment correlation coefficients between friendly dependency scores and other measures taken during this series, presented in Table 2, are neither significant nor consistent in direction. The only correlations approaching significance are positive relations between dependency scores and hostile peer interaction scores; these correlations hovered around zero in observation series IIB. These data, considered in conjunction with the data presented in the previous section, suggest that negative relations between dependence on adults and measures of social status and participation with children may come to exist only after a period of several weeks' acquaintance in a preschool group.

Additional evidence of a change in dependence on adults is furnished by tests of differences in dependency scores obtained in the IIA and IIB observation series. The mean differences in scores were significant beyond the .001 level by two-tailed t tests for all categories, although the direction

TABLE 2

CORRELATION COEFFICIENTS OF DEPENDENCY SCORES WITH OTHER MEASURES OBTAINED DURING OBSERVATION SERIES IIA, $N = 19$

Peer Acceptance or Participation Scores	ADULT DEPENDENCY SCORES* FA	C†	A+FA	A+FA+C
Sociometric Scores:				
First Sociometric	—.02	.11	—.03	—.02
Second Sociometric	—.03	—.04	—.09	—.10
Teacher Judgment Scores:				
First Judgment	.32	—.15	.22	.15
Second Judgment	.08	.01	.04	.01
Observed Social Acceptance Scores	.01	.16	.01	.02
Peer Interaction Scores: *				
A	—.07	.16	—.10	—.08
FA	.15	.10	.08	.08
C	.00	.24	—.01	.02
H	.33	.31	.35	.39
A+FA	.07	.13	.01	.01
A+FA+C	—.07	.10	—.11	—.10

* Observation category letters are abbreviations for names of the categories, as follows: A = Association; FA = Friendly Approach; H = Hostile.

† There were two zero conversation dependency categories, hence $N = 17$.

of the difference was not the same for all categories. Friendly approach and the additive combination dependency scores were larger in IIA than in IIB, while conversation dependency scores were higher in IIB.

Zero scores in the dependency categories of association and hostile prohibited treatment as continuous variables. Twelve *Ss* had no association interaction with adults in IIA, but only four *Ss* had zero association dependency scores in IIB. Hostile "dependency" interactions were recorded for seven children in IIA and for 11 children in IIB.

SUMMARY AND CONCLUSIONS

Relations between dependence on adults and social acceptance by peers were studied, using as *Ss* 38 children attending two newly formed preschool groups. Dependency was measured as the observed number of social interactions with adults in nursery school free play situations.

A negative relation was obtained consistently between dependency scores and measures of peer social acceptance obtained after several weeks of acquaintance. Significance of *r*'s varied for categories of dependency scores but, in general, significant negative relations were found to exist between dependency and sociometric scores, teacher judgments of popularity, observed social acceptance in play, and number of observed friendly interactions with playmates (but not with hostile interactions). These data indi-

cate that dependence on adults in the preschool situation accompanies relatively low social status and participation.

One of the groups of 19 *Ss* was observed and tested at the beginning of acquaintance. The relations between dependency scores and peer social acceptance measures were neither significant nor consistent in direction. Changes in dependence on adults as acquaintance progressed suggest that further investigations of social interactions of both adults and children in newly formed preschool groups may contribute knowledge of how dependence on adults waxes and wanes in children as they function in groups.

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SEX DIFFERENCES IN SOCIAL ACCEPTANCE AND PARTICIPATION OF PRESCHOOL CHILDREN

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The opinion is often expressed by both casual and experienced observers of nursery school free play that girls seem to engage in more social interaction of a friendly nature than do boys. However, research on sex differences in social participation of preschool children has been limited to specific traits or actions, such as aggression, hostility, sympathy, etc. Studies of social acceptance in the preschool years also have given but little attention to sex differences. Sociometric studies of these ages (1, 2, 4) report that choices on sociometric tests tend to be for the same sex as the subject, but do not report on sex differences in sociometric scores.

The authors have reported elsewhere investigation of relationships between four measures of peer social acceptance and participation (5, 7) and a measure of dependence on adults (6) for 48 children attending three newly formed preschool groups. This report describes the additional analyses of these data needed to provide empirical answers to three questions: (a) Do preschool boys and girls differ in scores obtained on measures of social acceptance and participation? (b) Are there sex differences in the relationships existing between concurrent measures of social acceptance and participation? (c) If they occur, are sex differences in social acceptance by peers affected by the progress of acquaintance in newly formed preschool groups?

SUBJECTS AND PROCEDURES

Both the subjects (*Ss*) and procedures have been described in detail in preceding reports (5, 6, 7). All *Ss* attended newly formed groups in the Laboratory Preschools of the University of Iowa's Child Welfare Research Station. Data reported in Tables 1 and 2 were collected concurrently and are those of the final test periods for two preschool groups. Data reported in Table 3 include another preschool group in addition to these two. Test periods for all three groups began within the first month of acquaintance and were spaced at 10 calendar day intervals.

[1] Now at the University of Kentucky.

The five measures of social acceptance and participation were as follows: (a) sociometric score, obtained from verbal choices of *Ss* (5); (b) teacher judgment score, obtained from teachers' listing of best friends (5); (c) observed social acceptance score, or, roughly, the sum of the number of children for whom the *S* was observed to be one of the three peers played with most frequently (7); (d) peer interaction score, or, the average incidence during two minutes of nursery school free play of social interactions with other children categorized as association, friendly approach, and hostile interaction (7); peer interaction scores were obtained for these categories both singly and in combinations; (e) adult dependency score, or, the average incidence of social interactions with adults categorized in the same way as peer interaction scores (6). The standard observation unit to which this average refers is two minutes.

TABLE 1

DIFFERENCES IN MEAN SCORES OF 18 GIRLS AND 18 BOYS FOR MEASURES OF SOCIAL ACCEPTANCE AND PARTICIPATION

Measure of Social Acceptance or Participation	Girls *Mean*	Boys *Mean*	D_M
Sociometric Score	39.83	29.72	10.11*
Teacher Judgment Score	10.41	9.68	.73
Observed Social Acceptance Score	12.67	11.08	1.59
Peer Interaction Scores:			
Association	.96	.74	.22
Friendly Approach	1.28	1.10	.18
Hostile	.32	.38	.06
Association + Friendly Approach	2.24	1.84	.40
Adult Dependency Scores:			
Association (12 girls, 17 boys) †	.04	.05	.02
Friendly Approach	.44	.50	.06
Hostile (10 girls, 15 boys) †	.04	.06	.02
Association + Friendly Approach	.48	.56	.08

* This difference in means was significant at the .05 level. No other differences in means were significant by either *t* or *F* tests.

† The *Ss* subtracted for these means were those having zero adult dependency scores in these categories.

RESULTS

1. Do preschool boys and girls differ in scores obtained on measures of social acceptance and participation?

The only measure of social acceptance or participation with a significant difference in mean scores for the two sexes was the sociometric test, as shown in Table 1. Sociometric scores of girls averaged one-third higher than scores of boys. Sex differences could not be demonstrated for any

other measure, although girls had slightly higher scores than boys on all measures of peer acceptance and participation, excepting hostile interaction, and boys had slightly higher adult dependency scores than girls.

2. Are there sex differences in the relationships existing between concurrent measures of social acceptance and participation?

Correlations between measures of peer social acceptance and participation were not affected by sex differences, as shown in Table 2. Only one of 12 possible differences in correlations was significantly different from zero. Despite the higher mean sociometric scores for girls, there were no significant sex differences in correlations of sociometric scores with other peer social behavior measures.

TABLE 2

DIFFERENCES IN CORRELATIONS OF 18 GIRLS AND 18 BOYS BETWEEN MEASURES OF SOCIAL ACCEPTANCE AND PARTICIPATION

Measure of Social Acceptance or Participation	Sociometric Score			Teacher Judgment Score			Adult Dependency Score†		
	Girls	*Boys*	*p**	*Girls*	*Boys*	*p**	*Girls*	*Boys*	*p**
Sociometric Score				.58	.42	..	—.42	—.10	(.06)
Teacher Judgment Score	.58	.42	..				—.38	—.35	..
Peer Interaction Scores:									
Association	.49	.55	..	.71	.67	..	—.54	—.19	.02
Friendly Approach	.56	.44	..	.48	.85	.02	—.75	—.51	.02
Hostile	—.09	.36	..	.19	.39	..	—.12	.09	..
Association + Friendly Approach	.56	.54	..	.75	.82	..	—.68	—.38	.02

* *p* entries are those of differences significant beyond the .05 level in these product-moment correlations.

† The Association + Friendly Approach Dependency Score was used for these correlations. Friendly Approach Dependency Score correlations were similar to these, except that the correlations with sociometric scores differed significantly (.02 level): —.39 (girls) and .01 (boys).

Sex differences did occur for some of the negative relations existing between measures of peer social behavior and adult dependency scores. The negative correlations between peer interaction and adult dependency scores were significantly larger for girls than for boys in all except the hostile category scores. The negative relation between sociometric scores and adult dependency scores (see footnote †, Table 2) may also be described as significantly larger for girls than for boys.

It is interesting to speculate about sex differences in this area. It may be in our culture that girls who are less popular feel freer than boys to seek satisfaction from teachers through dependency, whereas boys have already begun to learn that dependency is not "boylike." The not-popular boy may tend more to seek solitary activities or some type of behavior

other than dependency to compensate for his lack of popularity. It could also be that adult dependency is more satisfying to girls than it is to boys and that those girls who seek it have fewer social needs remaining to be satisfied by the peer group, hence, are less well accepted. The picture might change with the sex of the adult, as well, with girls in the preschools being relatively more completely satisfied by the predominantly female teachers, whereas, with a group of male teachers dependency behavior might interfere with boys' popularity. However, the head teacher was male in one of the two groups reported in Tables 1 and 2. His group did not differ in measures of dependence on adults from the group with all female teachers. Adult dependence may also be due simply to lack of techniques for relating with peers (6).

3. Are sex differences in social acceptance by peers affected by the progress of acquaintance in newly formed preschool groups?

Inspection of Table 3 suggests that sex differences changed in three consecutive test periods for sociometric and teacher judgment scores, but did not change in the same direction for the two measures. By *t* tests, the

TABLE 3

DIFFERENCES IN MEAN SOCIOMETRIC AND TEACHER JUDGMENT SCORES OF 24 GIRLS AND 24 BOYS IN THREE CONSECUTIVE TESTS

Test Period	Girls *Mean*	Boys *Mean*	D_M	*t*	*p*
Sociometric Scores:					
First Period	33.58	29.88	3.70	1.12	NS
Second Period	37.79	29.92	7.87	2.71	.01
Third Period	40.00	28.37	11.63	3.94	.001
Teacher Judgment Scores:					
First Period*	11.37	7.44	3.93	3.12	.01
Second Period*	10.83	8.56	2.27	2.20	.05
Third Period	11.19	10.30	.89	.78	NS

* Teachers judged one child of each sex to have no friends in the first and second test periods.

mean sociometric scores of girls did not differ from scores of boys in the first test period, but did thereafter, while, for teacher judgment scores, only the final test period difference lacked significance. However, the *F* for the test of sex differences obtained by a Lindquist Type I analysis of variance (3) was significant at the .05 level for sociometric scores in these periods but was not significant for the corresponding teacher judgment scores. In neither analysis were the *F*'s significant for test period or for the interaction between sex and test period. Hence, it could not be demonstrated for these data that either the sex difference in sociometric scores or the lack

of a significant sex difference in teacher judgment scores was affected by the progress of acquaintance in newly formed preschool groups.

Intercorrelations between sociometric scores on the first and second test periods were .56 for girls and .76 for boys, and the sex difference in *r*'s was significant at the .03 level. Intercorrelations for the second and third test periods were .80 for girls and .50 for boys. This difference in *r*'s, opposite in direction from that of the first and second test periods, was significant at the .0005 level.

Summary and Conclusions

This investigation explored sex differences in five measures of social acceptance and participation obtained for 24 boys and 24 girls attending three newly formed preschool groups. Girls had higher sociometric scores than boys but there were no significant sex differences in teacher judgments of social acceptance, observed social acceptance, degree of social interaction with peers, or degree of dependence on adults. Correlations between measures of peer social acceptance and participation were not affected by sex differences. However, the majority of the negative correlations between the measure of dependence on adults and both sociometric scores and peer interaction scores were significantly larger for girls than for boys. Progress of acquaintance in the nursery school groups did not demonstrably affect the sex difference in sociometric scores.

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PERFORMANCE OF NEAR EASTERN CHILDREN ON THE DRAW-A-MAN TEST[1]

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When Goodenough (2) designed the Draw-a-Man Test for children she believed that she was dealing with a task so universally familiar that her norms might be applicable to all populations. On the basis of data surveyed in a recent review (3) Goodenough unequivocally abandons this position. The present paper reports further data relative to cultural influences based upon 708 Draw-a-Man tests collected in Lebanon and Egypt.

PROCEDURE

All drawings were obtained in accordance with the procedure recommended by Goodenough (2). There were slight local variations in paper size but the smallest used was 7 by 9½ in. and the largest was 9½ by 12½ in. All drawings were obtained in the children's regular classrooms. The teacher was usually present during the testing. The test was administered by the author or by a research assistant one of whom was present at all times to see that proper testing conditions were maintained. In all cases, dates of birth were obtained from school records. The scoring directions for Goodenough's 51 points were carefully followed.

SUBJECTS

The data to be reported here come from four groups described below.

Port Said School. This is a government school in Port Said, Egypt. Local school officials felt that the pupils in this school are representative

[1] This study was undertaken during 1955-1956 when the writer was a visiting professor at the American University of Beirut, Lebanon. The writer wishes to express his appreciation to the Rockefeller Brothers Fund whose grant to the American University of Beirut made the research possible; to the American University of Beirut for providing facilities; to Mrs. Adele Hamdan Taky Din, Miss Leila Bikamati, Mrs. Yvonne Sayegh, and Mrs. Marie-Therese Broussalian, who served as research assistants; and to the many principals, teachers and pupils for their cooperation. He is also grateful to the staffs of the departments of psychology and education for their valuable counsel and criticism.

of the total Port Said school population. About 90 per cent of the pupils are Moslem. In Egyptian government schools entrance is at age 6. One room was tested at each grade level from grade 1 through grade 5.

Sidon School. An American school in Sidon, Lebanon, operated by the Presbyterian church. Pupils enter the kindergarten at age 4. While there are some boarding pupils, the majority are day pupils from Sidon. Sidon being chiefly Moslem, the majority of the pupils are from Moslem homes. Testing extended from kindergarten through grade 4.

Armenian Schools. Armenian data were gathered from two schools in Beirut. One, called Armenian A, is a private, tuition-charging school; the other, called Armenian Z, is a free school operated by a philanthropic society in one of the poorest Armenian neighborhoods. Most pupils enter at age 5. All grades from kindergarten through grade five were tested.

University School. An elementary school for Arabic-speaking pupils operated by the American University of Beirut. The enrollment is approximately half-Christian, half-Moslem. Most pupils come from upper middle class homes. It is for boys only. Grades kindergarten through five were tested. Kindergarteners enter at age 5. This school more nearly represents an American curriculum and American methods than does any of the other schools.

TABLE 1

DRAW-A-MAN TEST RESULTS FROM VARIOUS SCHOOLS

	Port Said			Sidon			Arm. A			Arm. Z			Univ.		
Age	*N*	*M*	*SD*	*N*	*M*	*SD*	*N*	*M*	*SD*	*N*	*M*	*SD*	*N*	*M*	*SD*
5 ...				23	104	17	20	115	22	11	84	11	14	96	16
6 ...	37	94	12	32	84	13	16	116	21	15	87	13	15	93	13
7 ...	30	84	14	18	79	10	32	110	21	26	85	17	14	97	18
8 ...	83	83	16	11	84	9	22	106	24	40	76	13	15	101	16
9 ...	32	88	13	14	69	7	32	101	23	30	73	11	11	84	16
10 ...	24	80	10	7	62	11	36	95	18	31	74	15	17	97	17

RESULTS

Table 1 presents for each age level for each group the number of cases, the mean, and the standard deviation. The table begins at age 5 for each group except Port Said, where as indicated earlier, school entrance is at age 6.

Several aspects of Table 1 require attention. First of all, we may note the large differences between the Armenian A and the Armenian Z groups. These two groups probably represent in socioeconomic status and education the "best" and the "poorest" Armenian groups in Beirut. While there is

a considerable difference between the means of the two groups at all ages, the two groups are alike in that the trend of IQ's with age is steadily downward. At ages 5 and 6 the midpoint between the means of the two Armenian groups is approximately 100.

The Sidon school and the University school at age 5 each has an average score approximating 100. Port Said, whose first score is available at age 6, at that level has a mean of 94. In other words, these groups start with about the same performance as the American normative group.

The University school maintains this level, but the other two groups just mentioned as well as the Armenian groups drop considerably in Goodenough IQ with increasing age. At age 10 the Egyptian data are very similar to the findings recently reported by Fahmy for another Egyptian sample (1). The Sidon group at age 10 has the exceptionally low mean of 62, but this should not be accepted as representative because it is based on only seven cases. However, at ages 8 and 9 the over-all average of the Sidon sample is less than 80. In the case of the Armenians, the Port Said group and the Sidon group, the difference between the 5- and 6-year-olds and the 10-year-olds is significant at the .001 level of confidence. In brief, two samples from Egypt (Fahmy's and ours) and three samples from Beirut and Sidon in Lebanon indicate that in the Near East children have mean Draw-a-Man quotients approximating 100 at ages 5, a slightly lower mean at age 6, and a mean of about 80 at age 10.

Discussion

These data seem to indicate that there are cultural handicaps to Draw-a-Man performance in the Near East, but that these handicaps affect children most strongly after age 6.

What are the handicaps in experience which create downward trends in Goodenough scores? Any explanation which we offer is obviously a post hoc one. In our opinion, downward trends in scores are related to deficiencies in the child's experience relative to representation of the human figures, as by dolls, masks, wood carvings, sculpture, paintings, and other pictures. In general, the Near Eastern child's visual experience with human representations is limited. In former times, the Islamic world although approving geometric art enforced a taboo against representation of the human figure. At the present time this taboo seems not to exist outside of the Arabian peninsula, but perhaps as a consequence of the former taboo, there is little positive valuation of representative art. Children's books and magazines are few. In schools one seldom sees on the walls the placards and posters resulting from children's projects which are common in American schools.

It will be noted that the students of the University school are the only set of subjects not showing a decline in Goodenough IQ with age. This is the group whose education is most similar to that of Western children.

It also seems certain that the parents of these children have been more affected by Western culture than have the parents of other groups of subjects.

Summary

Draw-a-Man tests given to children between the ages of 5 and 10 years in Lebanon and Egypt indicate that at ages 5 and 6 the mean Goodenough quotient is approximately 100. In most groups the mean quotient decreases with age. A cultural explanation of this decrease is suggested.

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A CROSS-CULTURAL STUDY OF THE REINFORCEMENT OF CHILD BEHAVIOR[1]

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Few psychologists reject the proposition that the rewarding of an act increases the frequency, vigor and promptness with which it will recur. That the strength of a response can be increased by reward has probably been recognized from an early human period. It is likely that parents and other adults—without benefit of Thorndike, Skinner and others—early found that reward was an effective means of social control. It goes almost without saying that they rewarded those acts of which they approved, and hence rewards had the effect of transmitting and inculcating social values.

It follows that if one knew what child behaviors were being rewarded in a society one could formulate hypotheses concerning both the values of the adults and the future behavior of the children. But in a "field situation" it is difficult to know what is being rewarded. The approval of child behavior often occurs in the home, or in some other setting in which it cannot readily be observed. We wish to report some data obtained with a method which we believe will enable a researcher to investigate in nearly any society those reinforcements which probably play a major part in the socialization of the child.

METHOD

The method consists in using the critical incident technique developed by Flanagan and his associates (1). In general, this technique involves asking the subject to describe one or more instances of behavior of a specified kind. In the present connection this means that the subject is asked to describe instances of behavior on his part for which he has been praised.

[1] The research here reported was done during 1955-1956 while the author was a visiting professor at the American University of Beirut, Lebanon. The writer wishes to express his gratitude to the University for making the study possible, and to the Rockefeller Brothers Fund for a grant to the University which defrayed the costs of the investigation. He wishes also to express his appreciation to those who served as research assistants in the study (Mrs. Adele Hamdan Taky Din, Miss Leila Biksmati, Mrs. Yvonne Sayyegh, and Mrs. Marie Therese Broussalian) and to the principals, teachers and pupils who so generously cooperated.

The subject is not asked to give generalizations. Instead the investigator derives generalizations from the analysis of many specific incidents.

In the present investigation all data were gathered by means of individual interviews of school children. Specifically, the procedure is as follows: The child is taken from his classroom to the interviewing room by the interviewer. After preliminary remarks to establish rapport the interviewer obtains from the subject his name and his age at his last birthday. He then says: "I am interested in knowing what things boys and girls do that cause people to praise them. Do you remember a time lately when you did something for which someone praised you? Tell me about a particular time when someone praised you."

If the response does not indicate in detail what the child did, or just who was involved or just who gave the praise, appropriate supplementary questions are asked. The interviewer records the responses as nearly verbatim as is possible. In each case, the interview is conducted in the native language of the child. In the present study the answers of children whose primary language was not English were translated by the interviewer and recorded in English.

After the first incident is recorded, the interviewer says, "Now tell me about another time when you were praised." In the study here reported only two responses were requested from each child.

Subjects

All subjects were attending schools in Beirut, Lebanon, and were between 5.0 and 10.99 years of age. The groups were as follows:

Americans. These were pupils at the American Community School in Beirut. In the main they were children of parents employed in Lebanon by American government agencies, by the American University of Beirut, or by American oil companies and other business concerns. By most standards of classification, the majority of the subjects came from middle class well-educated parents. At the time they were tested (March-April, 1956) each child had been in Lebanon a minimum of six months. Many had resided in Lebanon two or more years. Some non-Americans attend this school; their responses were excluded from the results. The pupils of this school constituted the majority of American children of school age residing in Beirut in 1955-1956. There is no assumption that this group is typical of American children in the United States, but it is believed that many American children would give responses similar to those which we obtained. The American subjects totalled 120 children. There was approximately equal representation of the two sexes, and of the various age levels.

Arabs. This group consisted of 240 children chosen so that they could be conveniently subdivided in various ways. The subgroups were boys and girls (120 of each), Moslems and Arab Christians (120 of each), pupils

of private schools and pupils of public schools (120 of each) and three age groups, 5- to 6-year-olds, 7- to 8-year-olds and 9- to 10-year-olds (80 of each).

Armenians. Children of this group attended a private Armenian school which is one of the best Armenian schools in Beirut. They belong primarily to the middle class. In most cases, their families emigrated to Lebanon following World War I. In this group there were 60 subjects equally divided as to age and sex.

Jews. These subjects came from a school which is attended by the majority of the children of the Jewish colony in Beirut. All social classes are represented, but it is believed that few parents fall into the unskilled labor classification. The majority of the families of these children have lived in the Near East for several centuries. Arabic is their primary tongue and they were questioned in this language. This group contained 60 subjects approximately equally distributed in regard to age and sex.

Categorization of Incidents

The incidents reported fell into certain categories. These categories, which are listed in Tables 1 and 2, are as follows:

1. *Academic.* This class includes all incidents relating to academic performance, such as being praised for doing lessons, for doing them well, for grades, for improvement, etc. Assisting teacher, however, falls in category 8, and doing unassigned creative or constructive work whether associated with the school or not is placed in category 14.

2-8. *Assistance.* These items are differentiated from each other in terms of the person to whom assistance is given. Sample items are: helped mother wash dishes, ran out and bought groceries for my aunt, etc. Item 6, assisting unfortunates, includes helping a blind man across the street, helping someone who has been injured, giving alms to the poor or to beggars, etc.

9-11. The titles of these categories shown in Table 1 are self-explanatory. "Being quiet" includes refraining from activity as well as refraining from making noise.

12. *Giving or sharing.* This heading indicates voluntarily offering a present to others, giving food, sharing a toy, etc. It does not include alms giving, which is included under item 6.

13. *Creative work.* Under this class is included such items as unassigned art work, making a dress, making a boat or a kite, constructing toys or models, and organizing a group activity.

Categorization of Rewarding Persons

As shown by Table 3, the persons doing the praising were classified according to their relationship to the child. These persons were mother,

father, teacher, adult relatives, and other children. Some persons who were reported as praising did not fall into one of these categories; they were omitted from the tabulations. For this reason the percentages in Table 3 do not total 100 per cent.

Results

Table 1 indicates the frequency of each kind of incident in each of the four main groups. Table 2 gives the same information for the various subdivisions of the Arab group. The other groups are not large enough to justify such subdivision. Table 3 compares the groups in regard to the persons who did the praising. Each set of results will be briefly discussed below.

Table 1 demonstrates that the relative frequencies of various kinds of rewarded behavior vary greatly between groups. For example, there is a large difference between the American group and the other groups in regard to the per cent of incidents which involve academic performance (item 1 of Table 1). In the American group praise for academic performance constitutes only 5 per cent of the total. In other groups it makes up from 28 to 41 per cent of the total (p of difference of 5 to 28 per cent $< .001$). This difference may be due to the fact that the American school is a "progressive" one which, between ages 5 and 10, puts very little pressure upon the pupil. By and large, the parents seem to approve of the

Table 1

GROUP COMPARISONS OF INCIDENTS REPORTED: PERCENTAGE OF RESPONSES IN EACH CATEGORY

	American	*Arab*	*Armenian*	*Jewish*
1. Academic performance	5%	28%	31%	41%
2. Assist mother	25	26	15	22
3. Assist father	6	2	0	2
4. Assist sibling	9	4	3	5
5. Assist relatives	0	2	3	0
6. Assist unfortunate	0	9	12	3
7. Assist peers	8	0	1	2
8. Assist others	7	5	3	3
9. Being quiet	1	3	5	2
10. Being polite, obedient	5	11	7	7
11. Sports and games	6	2	3	2
12. Giving or sharing	9	2	8	3
13. Creative work	13	2	8	3
14. Miscellaneous	6	5	4	7
Number of children	120	240	60	60
Number of responses	240	440	120	116

permissive atmosphere of the school. In contrast the majority of the Lebanese schools stress academic achievement, even among 5-year-olds, and the parents, too, stress school performance.

While item 1 of Table 2 shows a decline with age in the relative importance of academic achievement among the Lebanese subjects, this is probably due to the fact that other forms of praised behavior, such as assisting others, increase with age. The introduction of new behavior reduces the *proportion* of incidents concerned with praise for academic performance but does not indicate that academic work becomes less important in an absolute sense.

TABLE 2

COMPARISONS OF SUBDIVISIONS WITHIN THE ARAB GROUP: PERCENTAGE OF INCIDENTS IN EACH CATEGORY

	Religion		Sex		School		CA		
	Christ.	*Moslem*	*M*	*F*	*Priv.*	*Gov't*	*5, 6*	*7, 8*	*9, 10*
1. Academic performance	26	30	35	21	29	27	46	21	17
2. Assist mother	26	26	18	33	21	31	19	33	25
3. Assist father	2	2	2	2	0	4	2	1	3
4. Assist sibling	3	5	2	5	6	2	1	4	6
5. Assist relatives	2	2	2	3	1	3	1	3	3
6. Assist unfortunate	8	9	10	8	10	7	1	7	18
7. Assist peers	0	0	0	0	0	0	0	1	0
8. Assist others	7	3	5	5	5	5	2	4	9
9. Being quiet	3	2	1	4	4	2	5	1	3
10. Being polite & obedient	12	9	11	10	9	12	14	12	6
11. Sports & games	1	3	2	1	3	1	1	1	3
12. Giving or sharing	1	2	2	1	2	1	0	3	2
13. Creative work	2	1	2	1	2	1	3	2	0
14. Miscellaneous	7	4	7	5	6	4	6	7	5
Number of children	120	120	120	120	120	120	80	80	80
Number of responses	225	215	215	225	221	219	149	147	146

Among the Lebanese groups, the Jewish group is highest in respect to the emphasis placed upon academic achievement. The p of the Arab-Jewish difference is .01. The Armenian group, which is second, is not significantly different from the Arab group. Table 2 shows that within the Arab group Christians and Moslems do not differ in giving praise for school performance. But boys receive more praise for academic items than do girls.

Attention is next directed to the categories which deal with assisting or helping others (item 2-8). In all groups the child is praised for helping the mother more often than for helping other individuals. It will be noted

that the values for assisting father, assisting siblings, assisting peers, and assisting "others" are appreciably greater for the American group than for any other group. Apparently American children are encouraged to enter into cooperative activities rather widely, whereas the Lebanese child's helpfulness centers chiefly upon the mother. An exception to this generalization arises in the case of assisting unfortunates, the majority of whom are street beggars who are blind or crippled or otherwise handicapped. The Near Eastern custom of giving alms to such people is engaged in by children as well as by adults, and children are praised for their almsgiving. This kind of charity seems to be almost absent among the American and among the Jewish children. At any rate, they report no praise for almsgiving.

It will be noted that the American children are seldom praised for being quiet or for being polite and obedient (item 9). The Lebanese parents and the Lebanese teachers, on the other hand, frequently praise the child for sitting still and making no noise. The American-Arab difference in this respect is significant at the 1 per cent level of confidence.

Praise for performance in sports and games (item 11) has three times the frequency among Americans as among the Arab and Jewish groups. The p value of the American-Arab difference is .02.

Giving and sharing (item 12; this item does not include almsgiving) is approximately three times as frequent in the American group as in the Arab and Jewish groups (p of American-Arab difference is .001). Creative work, such as constructing things and initiating projects, is highest among the American children. The American frequency (13 per cent) is 6½ times the Arab frequency (2 per cent) ($p < .001$). The Armenian group is second highest (8 per cent).

Table 3 shows the relative frequency with which children are praised by various persons. The three Near Eastern groups resemble each other in that the major portion of the praise is administered by adults, chiefly by parents and teachers. Near Eastern children appear not to be rewarded by

TABLE 3

PERSONS GIVING PRAISE: PERCENTAGE OF INCIDENTS IN EACH CATEGORY

Persons Praising	*Americans*	*Arabs*	*Armenians*	*Jews*
Mother	37	44	32	34
Father	13	17	7	11
Teacher	5	15	24	28
Adult relatives	0	9	9	8
Children	25	4	12	1
Number of children	120	240	60	60
Number of responses	240	440	120	116

other children, the amounts of praise received from children being only 1, 4, and 12 per cent in the three groups. The difference between the American group and each of the other groups has a p of .001 or less. These facts are in accord with the earlier finding that there is only infrequent reference in these groups to assisting peers. Among the Americans, however, approval by other children makes up 25 per cent of the total. For the Americans, teachers are responsible for only 5 per cent of the praise incidents, whereas for the Jews and the Armenians the corresponding figures are respectively 28 and 24 per cent (p of difference between 5 and 24 per cent $< .001$). The Americans appear to relate much more to their peers; the Lebanese child relates predominantly to adults.

In summary, the American children are distinguished from the other groups as follows: They receive a larger portion of their praise for assisting persons other than unfortunates (with proportionally less assistance given to the mother by the Americans than by the others). They also exceed the other groups in rewards for performance in sports and games, giving and sharing, and in creativity. The Near Eastern groups receive relatively more praise than the Americans for academic achievement, for assisting unfortunates and for being quiet, polite and obedient.

It will be noted that while there are some differences among the three

TABLE 4

CORRELATIONS BETWEEN THE RELATIVE FREQUENCIES OF CATEGORIES

	Arab	*Armenian*	*Jewish*
American	—.11	.06	.32
Arab		.67	.83
Armenian			.68

Near Eastern groups, there is a considerable degree of agreement among them. There is a generalized Near Eastern pattern of child approval which differs considerably from the American pattern. This is shown by Table 4, which contains the correlations between the rank orders of the categories for each pair of groups. It will be noted that the intercorrelations of the Lebanese groups are between .67 and .83, whereas the correlations between each of these and the American group range from —.11 to .32.

If adequate data on values were available, we believe it could be shown that praise is bestowed in accordance with the prevailing values of each group. For example, Near Eastern society is known to be very strongly family-centered. Accordingly we find that children are frequently rewarded for assisting relatives but seldom rewarded for assisting peers or other non-relatives. The exception to this rule is the giving of alms. Arab children

are praised for giving alms; American children are not. This difference too accords with adult values. The well-known interest in sports shown by the American adult is paralleled by rewards for participation in games in childhood. Near Eastern interest in sports is slight in comparison with the interest in America; we find Near Eastern children are seldom rewarded for achievement in sports. To give further examples from our data of the probable congruence between adult values and the rewarding of child behavior would unnecessarily repeat material previously presented. While our data do not *prove* that values and habits are inculcated by reward, they seem entirely consonant with this interpretation.

Summary

The critical incident technique was used to investigate the relative frequency with which different kinds of behavior are rewarded in three Near Eastern groups of children and in an American group. Highly significant differences were found between the American group and the Near Eastern groups. While some differences exist among the Near Eastern groups, they have a considerable degree of similarity.

It is suggested that rewarding behavior by praise, and by other means, is an important method of transmitting and inculcating social norms and values. On the basis of our experience the critical incident technique is recommended to psychologists, anthropologists and others as a useful tool in making cross-cultural comparisons. Its usefulness, of course, is not limited to the study of praise.

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PERSONALITY FACTORS IN MIDDLE CHILDHOOD AS REVEALED IN PARENTS' RATINGS

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Over the past few decades, there has been a great deal of speculation about the development of personality in the early and middle years of childhood. Objective research at the childhood level, however, has lagged far behind theory-building. We are faced, in this area, with a great mountain of supposition and a handful of demonstrated facts. We can best grasp the ramifications of this imbalance when we realize that the understanding of child personality is not all that is at stake. Any theory which is concerned with the genesis of adult personality must make many assumptions about the nature of personality at the child level.

The most extensive investigation of child personality has probably been that of Gesell and his associates (9). Relying principally on naturalistic observation, these workers have succeeded in gathering data on a wide variety of behavioral aspects. But their findings have often been limited by inadequate statistical analysis, and they have been little concerned with gathering the correlative data that would be needed to understand fully the structure of personality at any given age level. Their major contribution, however, lies in the establishment of growth curves, which provide considerable insight into typical courses of development in many areas of behavior.

Another major longitudinal study of normal children is that of Macfarlane, Allen and Honzik (15), who relied on the less direct approach of interviewing mothers. They have reported a great deal of useful developmental data relating to behavior problems through the age range of 21 months to 14 years. Other workers, such as Paulsen (16), who have studied normal children have generally employed much smaller samples or dealt with a narrower realm of data.

Other large-scale studies have generally been more vitally concerned with behavior disorders and have utilized the large samples of more deviant subjects available through guidance centers. Notable examples are the studies of Ackerson (1) and Hewitt and Jenkins (11). Ackerson obtained ratings for over 3,000 children on 161 behavior traits, using primarily case

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material which had been gathered in interviews with mothers. He reports correlations of each of the traits with a number of selected criteria relating to intelligence, extensiveness of personality or conduct disturbance, and certain general personality variables.

Hewitt and Jenkins (11) studied the intercorrelations of a variety of behavior-disturbance variables for a somewhat smaller sample, using case records gathered at a guidance center. They confirmed the existence of three hypothetical behavior syndromes by *inspection* of the intercorrelations and related each of these syndromes to a particular type of family background.

In very few of the studies thus far published on early and middle childhood has there been an attempt to isolate the primary variables of personality by appropriate statistical methods. Such exceptions as Koch's studies of preschool children (12, 13) have employed samples which are rather small for precise factor determination. It is hoped that an initial remedy of this situation will be achieved through a research project recently undertaken at the University of Illinois.

The present report is the first of several articles relating to this project. The total research design calls for separate factorization of variables in three realms of data—questionnaire responses, objective-test responses, and behavior ratings. In general plan, this research follows the pattern of research which was first executed at the adult level and later carried out at the 11- to 14-year-old level (4). Ultimately, factors derived from the three realms of data will be related, and an attempt will be made to develop more adequate objective measures of the basic personality variables uncovered. A pertinent practical aim is the development of test instruments which can be readily used on a broad scale in the early grades and which will furnish useful information for educational and psychological guidance.

Procedures

The sample used for most of the research consisted of 198 children drawn from an elementary school in Decatur, Illinois. These children constituted the entire membership of four first-grade and four second-grade classes. The present report concerns only the data obtained from rating schedules sent to the parents of these children. Of the schedules which were returned, a total of 145 proved to be complete and usable for the present analysis. The rated sample to which these corresponded consisted of 68 girls and 77 boys. In age, they ranged from 6 years, 3 months, to 10 years, with a mean of about 7 years, 4 months.

The rating form was constructed with a view toward covering, in a concise way, as broad a range of personality variables as parents might be expected to rate. Most of the form consisted of trichotomous items to which parents were to respond with appropriate check marks. The items read as follows:

1. Prefers to play with younger children—prefers to play with children of same age—prefers to play with older children
2. Seldom or never intentionally destroys property—about as destructive as most children of same age—more destructive than average
3. Seldom or never willingly shares his belongings—about average, as far as sharing is concerned—more generous than average, often shares belongings with others
4. Has many fears, for example, of the dark, of animals, strangers, doctors, etc.—has a few fears—has practically no fears at all
5. Rather quiet—talks about as much as most children of the same age—talks a great deal, something of a "chatterbox"
6. Always on the go, tends to be overactive—about as active as most children of same age—less active than average
7. Rarely cries—cries about as much as most children of same age—cries more than most children
8. Rarely complains—complains about as much as most children of same age—complains a lot, hard to satisfy
9. Dislikes going to school—likes school about as much as most children—likes school very much
10. Talks in a rather quiet voice—speaks in about as loud a voice as most children—talks in a rather loud voice
11. Seldom or never sulks or pouts—sulks or pouts about as much as most children—sulks or pouts more than most children of same age
12. Falls or gets hurt fairly often—has the usual number of accidents for child of same age—seldom or never has an accident or gets hurt
13. Tires fairly quickly—has as much physical endurance as most children of same age—has unusual physical endurance
14. Speech is unusually fluent—repeats and hesitates in speech about as much as most children—stutters or stammers fairly often
15. Pronounces words with unusual precision and clarity—articulates as well as most children—pronounces rather poorly, speech often difficult to understand
16. A little difficult at bedtime, generally resists going to bed—about as reluctant to go to bed as most children—willing to go to bed, perhaps even slightly eager to do so
17. Fairly often tells deliberate untruths—tells an occasional fib—never tells lies
18. Never takes anything that belongs to someone else—has taken a possession of someone else at least once or twice—has stolen things on several occasions
19. Very much afraid of one or more animals—a little afraid of certain animals—no fear of any animals
20. Has no fear of strangers—a little afraid of new people—generally fearful of strangers
21. Afraid of the dark—seems a little uneasy unless at least a dim light is on—has no fear of the dark
22. Never bites fingernails—occasionally bites fingernails—often bites fingernails
23. Often sucks thumb—occasionally sucks on thumb when tired or disappointed—never sucks thumb
24. Often has stomach upsets—occasionally has an upset stomach—never has an upset stomach

25. Often has eliminative disturbances, diarrhea or constipation—has occasional eliminative disturbances—never has eliminative disturbances
26. Seldom or never has colds—has occasional colds—has frequent colds
27. Never has headaches—has occasional headaches—often has headaches
28. Has frequent temper tantrums—has temper tantrums occasionally—seldom or never has temper tantrums
29. Learned to talk somewhat late—learned to talk at about usual time (first word at one year, first sentence at two)—learned to talk earlier than most children
30. A little bossy, likes to tell others what to do—occasionally orders others about—seldom or never orders others about
31. Toilet trained earlier than most children—toilet trained at about the usual time (dry at two years)—toilet trained later than most children
32. Rather solemn, does not laugh very much—laughs about as much as most children of same age—has a very happy, cheerful disposition, laughs a great deal
33. Likes to show off, often calls "Look at me" when not doing anything outstanding—shows off about as much as most children of same age—seldom or never shows off
34. Nearly always does things when told—about as compliant as most children—often resists adult requests or commands
35. Seldom or never daydreams—daydreams occasionally—daydreams a great deal
36. Unusually sociable, seeks company of other children—ordinarily likes to play with other children—often prefers to play alone
37. Does not show much affection—about as affectionate as most children of same age—very affectionate, spontaneously hugs or kisses when meeting or saying goodbye to others
38. Somewhat fussy about food, will eat only certain things—has fairly definite food preferences, but will eat most food if hungry—will eat nearly anything
39. Demands much attention and help from parents—demands moderate amount of attention—self-sufficient, prefers to be on his own
40. Outgoing, mixes freely with other children—a little shy—very shy, bashful, fearful of other children
41. Plays mostly with children of own sex—plays with children of both sexes—plays mostly with children of opposite sex
42. Has many fights with other children—has occasional fights with other children—never gets into fights
43. Adventurous, bold, willing to take a chance—somewhat cautious—very retiring, cautious
44. Very constant interests—interests somewhat changeable—interests fade rapidly, very changeable
45. Nearly always sticks to tasks until they are finished—sometimes fails to complete things—generally quits too easily
46. Excellent health—generally good health—ill fairly often
47. Very imaginative—about as imaginative as most children of the same age—very practical-minded
48. Untidy, careless about appearance of self and belongings—fairly tidy—very neat, tidy, orderly
49. Very frank, expressive—a little secretive, reserved—secretive, keeps many things to self
50. Tends to be jealous of other children—occasionally shows jealousy—seldom or never jealous

51. Frequent bed-wetting—occasional bed-wetting—no bed-wetting
52. Faulty bowel control, soils self—rarely loses control of bowels—good bowel control, never soils self
53. Often has nightmares—occasional disturbing dreams—rarely or never has nightmares
54. Does your child have any physical defects or handicaps? _____ If so, please specify: _____
55. Does this child have any brothers or sisters? _____ If so, is this child: (a) the youngest ____, (b) the oldest ____, (c) neither ____?

The form contained as well a line for the rater's signature. Though the forms were sent to the parents jointly, about 90 per cent were returned with the mother's signature. The remainder contained variously the father's name, the names of both parents, the name of another close relative, or no signature at all. We may assume that the form was typically filled out by the mother with some collaboration on the part of the father.

Before any analysis of the data was undertaken, a response tabulation was obtained for each item. Each of the first 53 items was then dichotomized, the smaller end category being combined with the middle category in each case. Item 54 was scored 2 for "Yes" and 1 for "No." Item 55 was treated as four dichotomous variables which were renumbered 55, 56, 57 and 58 for all subsequent purposes. The "high" ends of these items respectively were "presence of siblings in the family," "youngest child," "oldest child," and "middle child." Three additional variables were also added to the score matrix: sex, grade, and age.

An intercorrelation matrix of phi coefficients was obtained for the 61 variables. Twenty factors were extracted by the complete centroid method. Fourteen of these were judged to be significant on the basis of a combination of criteria. New communalities were therefore computed on the basis of the first 14 factors and the extraction process was repeated. Fifteen factors were retained for rotation.[2]

An initial rotation was executed on an electronic computer with the aid of the oblimax routine. Further oblique rotations were performed with the aid of graphic plots. In the final stages of rotation, evidence of an additional hyperplane appeared between those for factors 4 and 5, and a sixteenth factor (factor 8 in the final matrix) was inserted for the sake of any alternative interpretations it might furnish. A few further rotations failed to take this factor very far from a position essentially intermediate between factors 4 and 5. For final presentation, the factors were rearranged in approximate order of decreasing variance. The final rotated factors are shown in Table 1. The intercorrelations of the reference vectors are shown in Table 2.

[2] The correlation matrix, unrotated factor matrix, and transformation matrix have been deposited with the American Documentation Institute. Order Document No. 5291 from American Documentation Institute, 1719 N. St. N.W., Washington 6, D.C., remitting $1.25 for 35 mm. microfilm or $1.25 for 6 by 8 in. photocopies.

TABLE 1

ROTATED FACTOR MATRIX*

	FACTOR NUMBER															
Variable	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*
1	−06	18	−12	17	02	09	11	−18	30	02	04	−01	12	−06	07	−08
2	−10	10	−22	−00	02	−11	−27	01	04	−02	−21	06	−29	−17	10	29
3	25	10	−03	−14	15	−06	09	01	14	−05	04	05	−08	18	06	06
4	00	−06	05	−63	10	−02	−01	41	−03	02	−25	−02	04	−10	05	−19
5	08	05	−27	−01	18	−01	−08	−09	24	01	−10	26	06	13	04	−01
6	−04	−29	29	04	10	25	−06	−09	−11	−27	24	30	02	−01	02	−11
7	−02	−03	05	28	−29	26	−11	01	−08	−02	−10	15	−07	−04	17	−04
8	−06	07	−04	−02	−64	06	08	46	−03	−01	07	−05	07	26	06	04
9	06	23	41	−00	07	−11	−13	−06	19	10	−01	10	−08	02	−03	02
10	03	24	02	−17	−05	26	−07	16	16	−16	−09	16	15	−10	−02	06
11	−07	01	06	09	−43	−00	−08	23	11	−03	−06	09	02	−03	−02	−02
12	−08	−05	27	−14	07	−04	05	03	05	−06	−07	01	06	−05	−33	−09
13	09	06	−08	−03	05	−25	03	−00	25	09	−25	−04	−07	01	−07	01
14	−13	01	−04	13	15	−02	−01	−25	−09	−51	−09	02	01	08	02	05
15	−33	06	−08	02	12	−04	−07	−19	−17	−35	−02	−07	−10	−07	−05	−00
16	07	02	10	03	12	04	07	−11	−01	−11	−03	02	−03	43	10	−07
17	01	−10	03	−05	00	−08	56	12	−20	06	00	04	05	−06	−03	04
18	−15	10	−08	05	−06	13	−32	−01	03	−02	−19	18	−25	11	−11	11
19	06	11	−16	−43	04	−05	−01	26	05	02	−01	−10	−02	−03	−01	−10
20	−08	−27	05	38	−03	−07	−01	−25	−04	07	04	−08	03	06	−02	−00
21	−07	00	−09	−42	00	08	07	34	−29	08	−04	−08	−05	07	08	06
22	01	04	02	−02	05	−18	01	−01	12	16	−00	−26	−04	−01	25	14
23	06	−30	−05	06	−10	−03	−14	05	25	06	00	02	−05	41	−06	05
24	06	31	05	06	06	09	06	−14	−03	−04	05	07	−04	00	−40	05
25	−01	−02	−05	−05	02	−03	−05	03	−07	36	−23	−06	−06	01	−51	05
26	−01	07	−03	04	−17	−15	29	04	11	−40	17	−01	−17	04	05	03
27	−03	−20	07	−16	16	−07	−36	02	06	22	24	−25	−01	−04	22	17
28	−06	07	−19	08	42	07	39	−34	12	−01	01	04	03	−07	04	−00
29	11	13	−04	24	08	30	01	−25	28	23	05	−08	01	−18	15	−04
30	04	−07	09	−01	10	−18	07	01	01	04	−13	−10	01	23	06	29
31	−06	32	−24	09	−07	−40	−01	−00	−08	04	09	−01	07	09	02	25
32	−14	−10	06	−26	38	−05	−08	−05	32	−05	06	25	07	03	−02	−01
33	20	−07	01	13	−01	−03	35	−08	−01	−03	−05	−19	−12	16	−02	01
34	11	−04	−33	−07	−21	01	−19	24	−22	03	07	07	04	−08	−00	18
35	−31	−11	−06	00	−06	−01	−12	−03	37	−09	11	−21	07	09	−12	06
36	−06	−49	07	07	03	05	05	00	10	−20	09	10	12	−01	−06	16
37	−23	15	−04	−15	06	−01	−01	04	27	01	17	04	01	18	−03	05
38	−12	07	−11	07	12	04	07	−10	−11	29	05	02	20	−15	13	−05
39	05	26	13	−12	17	−06	01	−10	04	06	04	−18	−26	−21	−00	−07
40	06	−61	−02	24	05	−02	09	−14	02	−01	−01	−00	00	−18	01	−05
41	12	01	08	00	−02	−05	−21	06	23	08	−21	−09	06	05	10	26
42	12	−08	26	−01	06	01	−06	−03	01	10	09	−07	01	01	−23	06
43	09	−06	17	30	09	16	09	−31	−07	−19	36	−07	10	13	02	05
44	−06	−09	−52	−06	06	−00	11	03	09	02	−05	03	−04	10	03	−01
45	05	04	−56	03	01	−04	−15	−09	−03	02	19	−05	−18	−04	−12	−03
46	15	−06	05	−02	−11	03	05	09	00	−35	02	−06	−07	−10	05	18
47	04	09	−01	03	01	−05	−01	−08	−44	−12	16	−21	06	04	−10	04
48	03	06	21	−08	02	13	18	02	12	−03	20	−04	−19	21	−08	04
49	08	−36	06	10	−14	−03	−04	−01	−09	−10	00	−38	−08	−25	−18	09
50	24	06	03	−14	36	09	33	−05	−07	−07	−14	06	04	−00	32	19
51	08	−14	−01	−05	06	30	14	−00	05	05	06	−09	13	11	04	−14

* Strictly speaking, this matrix contains correlations of variables with reference vectors. These, of course, are proportional to factor loadings within any given factor.

TABLE 1 (*continued*)

ROTATED FACTOR MATRIX*

Variable	FACTOR NUMBER *1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*
52	−09	11	16	14	07	32	−07	−19	−05	06	−05	02	16	30	−10	−10
53	−08	−02	12	05	16	03	03	−12	−07	01	−36	04	−09	18	03	01
54	−06	−07	−00	−02	11	07	01	03	03	−03	−02	08	−03	01	13	39
55	−15	−12	02	−02	05	17	−06	−07	−07	−04	−06	−07	−51	−02	07	−02
56	06	−05	00	04	01	−01	02	01	02	05	04	49	−51	01	−00	02
57	−09	03	−04	05	−02	59	−06	−07	−06	05	−05	−35	11	01	01	07
58	−20	−04	07	−04	01	−48	−04	−02	−07	−08	00	−22	14	01	10	−11
59	04	−02	−05	−00	08	01	02	03	−02	−10	−58	−01	07	−04	−04	28
60	−79	10	01	04	−06	03	06	−03	−03	14	−11	−05	−12	02	−03	07
61	−80	08	18	−14	−06	03	06	11	−04	03	04	−04	−05	03	−02	15

* Strictly speaking, this matrix contains correlations of variables with reference vectors. These, of course, are proportional to factor loadings within any given factor.

FINDINGS

In what follows we shall set out the significantly loaded salients, typically cutting off at about .25, but occasionally going down to .20 when this adds clarity. As usual, the variable descriptions will already have been reversed when the loading sign requires it, so that the person reading the list of salient items can take them as being all in the same direction. The phrase

TABLE 2

INTERCORRELATIONS AMONG REFERENCE VECTORS

Factor Number	FACTOR NUMBER *1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*
1		−05	−11	05	−05	07	−01	04	−12	−02	07	−08	−03	−03	09	−02
2	..		−05	13	−07	−10	12	−16	−05	05	21	−06	01	−02	05	05
3	..	..		−06	−15	16	−20	10	07	−22	−21	10	−04	04	−16	−14
4	..	..	..		−07	06	−01	−68	02	27	−13	−01	03	04	07	10
5	..	..	..	..		−06	−06	−61	14	−01	00	06	02	−14	16	14
6	..	..	..	..	..		−08	−01	−15	−10	−12	11	01	10	−02	−08
7	..	..	..	..	..	..		09	−01	−22	04	−02	06	00	22	−13
8	..	..	..	..	..	..	..		−13	−10	−01	09	03	08	−06	01
9	..	..	..	..	..	..	..	..		−04	−02	14	−03	09	−07	−00
10	..	..	..	..	..	..	..	..	..		−02	−13	04	−15	02	18
11	..	..	..	..	..	..	..	..	..	..		−11	04	−06	02	−08
12	..	..	..	..	..	..	..	..	..	..	..		−14	09	−04	−04
13	..	..	..	..	..	..	..	..	..	..	..	..		14	18	01
14	..	..	..	..	..	..	..	..	..	..	..	..	..		02	02
15	..	..	..	..	..	..	..	..	..	..	..	..	..	..		09
16	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	

first given for each item will be that corresponding to the positive pole of the factor. As usual, also, the variables and the tentative factor titles will be presented in bipolar fashion. The titles assigned to familiar factors are those introduced and discussed in another recent publication (4).

The integration of the present findings with others requires methodological considerations which have been discussed elsewhere (5). Space limitations prohibit full consideration of factor-matching techniques here. Essentially we have begun with a set of hypotheses about some 14 personality factors in the rating field, but the design does not prevent the appearance of other factor patterns than these if they exist. The problem is primarily that of interpreting the present fixed 7-year-old factors in terms of factors known for the adult world, since those known at the 11-year-old level have only, as yet, been represented once or twice (4) and below that there is only the published work of Koch (12, 13). Since the gap from 6 years to the adult period is large, we intend to be guided by any suggestions that the work of Gruen and Koch may provide regarding modifications of recognized factors at the childhood level. Unfortunately, factor matching requires identical markers, or markers as identical as the age range permits, and except in our own studies this matching of markers has not been observed. Even there we are in some difficulties, because of the special modifications in shaping variables for rating by parents, and because the Gruen rating was done by peers, whereas this was done by adults. Ultimately, the developmental identification of factors will be certain only when cross-sectional analyses have been made at about two-year intervals all the way down from the adult period. Accordingly, our present identifications are tentative, though they will be strengthened when the remainder of our data comes in on the 6- and 7-year-old cross-sectional study and on the 4- and 5-year-old cross-sectional study (7). In the technique of this matching, we must also consider the fact that the present arrangement emphasizes intra-familial variance relative to inter-familial variance, since the unavoidable vagueness of the normative standard favors intra-familial comparisons on the part of parent raters. In addition, it might be contended that our procedures favor the appearance of factors which are essentially a function of projected parental personality rather than child personality. The evidence for this sort of contamination of rating factors, however, is rather insubstantial. In the present case, comparisons with factors from other media suggest that parental rating biases have not been manifested in this way to a significant extent.

Factor 1. Intelligence-vs.-Retardation-Frustration (B)

61. Age—younger, vs. older (—.80),
60. Grade—first, vs. second (—.79),
15. Pronounces words with unusual precision and clarity, vs. pronounces rather poorly, speech often difficult to understand (—.33),
35. Seldom or never daydreams, vs. daydreams a great deal (—.31),

3. More generous than average, often shares belongings with others, vs. seldom or never willingly shares his belongings (+.25),
50. Seldom or never jealous, vs. tends to be jealous of other children (+.24),
37. Does not show much affection, vs. very affectionate, spontaneously hugs or kisses when meeting or saying goodbye to others (—.23),
33. Seldom or never shows off, vs. likes to show off, often calls "Look at me" when not doing anything outstanding (+.20).

It is curious that our first and largest factor should initially appear the most obscure in meaning. However, the explanation of its obscurity is almost certainly that it involves strong selection effects. In the two-year, two-grade range of our sample the academically more retarded children tend to be in the second grade and older. Consequently, it is almost certain that we have here picked out the general intelligence factor (Spearman's *g*, our *B* or second-order factor among primary abilities). As the alphabetical position *B* indicates, in an age-homogeneous population it is usually practically the largest factor, as it roughly is here.

In personality terms, it is most clearly perceived at the negative pole, where we see that the lack of recognition experienced by the dull child increases his emotional needs for affection, for self-assertion, for phantasy and for security. Our previous factorizations have shown this moderate accumulation of personality variables around the intelligence factor—poise, conscientiousness and wider interests being associated with the positive pole.

Factor 2. Parmia-vs.-Threctia (H)

40. Outgoing, mixes freely with other children, vs. very shy, bashful, fearful of other children (—.61),
36. Unusually sociable, seeks company of other children, vs. often prefers to play alone (—.49),
49. Very frank, expressive, vs. secretive, keeps many things to self (—.36),
31. Toilet trained later than most children, vs. toilet trained earlier than most children (+.32),
24. Never has an upset stomach, vs. often has stomach upsets (+.31),
23. Often sucks thumb, vs. never sucks thumb (—.30),
6. Always on the go, tends to be overactive, vs. less active than average (—.29),
20. Has no fear of strangers, vs. generally fearful of strangers (—.27),
39. Self-sufficient, prefers to be on his own, vs. demands much attention and help from parents (+.26),
10. Talks in a rather loud voice, vs. talks in a rather quiet voice (+.24),
9. Likes school very much, vs. dislikes going to school (+.23),
27. Never has headaches, vs. often has headaches (—.20).

This factor could only be one of the two major cyclothymia-vs.-schizothymia factors, *A* or *H*, and the latter is strongly indicated because the negative, threctic, end of the factor has none of the obstructive, rigid, cantankerous qualities which characterize schizothymia. It is appropriate that this should be one of the largest factors, since the two cyclothyme-schizothyme factors are in general among the largest, though *H* has

typically, as its alphabetical position indicates, been somewhat lower than this.

Factor 3. Superego Strength (G)

45. Nearly always sticks to tasks until they are finished, vs. generally quits too easily (—.56),
44. Very constant interests, vs. interests fade quickly, very changeable (—.52),
9. Likes school very much, vs. dislikes going to school (+.41),
34. Nearly always does things when told, vs. often resists adult requests or commands (—.33),
6. Less active than average, vs. always on the go, tends to be overactive (+29),
5. Rather quiet, vs. talks a great deal, something of a "chatterbox" (—.27),
12. Seldom or never has an accident or gets hurt, vs. falls or gets hurt fairly often (+.27),
42. Never gets into fights, vs. has many fights with other children (+.26),
31. Toilet trained earlier than most children, vs. toilet trained later than most children (—.24),
2. Seldom or never intentionally destroys property, vs. more destructive than average (—.22),
48. Very neat, tidy, orderly, vs. untidy, careless about appearance of self and belongings (+.21).

The only possible doubt that could arise regarding this pattern is whether it is the *C* pattern of ego strength or the *G* pattern of superego strength, but these alternatives always present a difficult choice when one tries to match factors from one study with those of another. In the first place it is an extensive pattern, as *G*, but more especially *C*, should be. Commonly one distinguishes on the grounds that *C*, ego strength, is more loaded in "calm-vs.-emotional" and "freedom from neurotic symptoms," while *G* is more loaded in "persevering," "conscientious," "stable in interests," and "insistent on order." In spite of the fact that *C*, Factor 7, has some ethical flavor, which we shall explain, the essential markers for *G* are so regularly and highly placed in the present factor that finally we had no doubt in identifying it as *G*. The identification is strongly confirmed by the same crucial markers appearing also in Gruen's *G* pattern for 11-year-olds (4) and the *G* pattern in the present research in teachers' ratings (6).

The additions from this study to the "within the home" *G* pattern are "likes going to school," "quiet" and "toilet trained early." *G* does not constitute a *temperamental contribution* to early toilet training, as does factor *H*; but, if our general hypothesis on *G* is correct, it is rather an *educational influence* from a good parent-child relationship and an orderly home.

Factor 4. Anxious Depression or Superego Proneness (O)

4. Has many fears, for example, of the dark, of animals, strangers, doctors, etc., vs. has practically no fears at all (—.63),
19. Very much afraid of one or more animals, vs. no fear of any animals (—.43),
21. Afraid of the dark, vs. has no fear of the dark (—.42),
20. Generally fearful of strangers, vs. has no fear of strangers (+.38),

43. Very retiring, cautious, vs. adventurous, bold, willing to take a chance (+.30),
7. Cries more than most children, vs. rarely cries (+.28),
32. Rather solemn, does not laugh very much, vs. has a very happy, cheerful disposition, laughs a great deal (—.26),
29. Learned to talk earlier than most children, vs. learned to talk somewhat late (+.24),
40. Very shy, bashful, fearful of other children, vs. outgoing, mixes freely with other children (+.24).

This is the typical pattern of fear combined with depressiveness which has long been recognized in the questionnaire realm as *O* factor, though it has never stood out too clearly in ratings. In the questionnaire it has had a tendency to be confused with *C*(—) or Q_4 (3). Here the fearfulness is paramount, amounting to a phobic or anxiety hysteric picture similar to the adult factor when it gets into the abnormal range, but the depressiveness is also suggested by the crying. In personality theory it remains uncertain whether this is a general dispositional timidity, or whether it is associated with stronger superego development.

Factor 5. Cyclothymia-vs.-Schizothymia (A)

8. Rarely complains, vs. complains a lot, hard to satisfy (—.64),
11. Seldom or never sulks or pouts, vs. sulks or pouts more than most children of the same age (—.43),
28. Seldom or never has temper tantrums, vs. has frequent temper tantrums (+.42),
32. Has a very happy, cheerful disposition, laughs a great deal, vs. rather solemn, does not laugh very much (+.38),
50. Seldom or never jealous, vs. tends to be jealous of other children (+.36),
7. Rarely cries, vs. cries more than most children (—.29),
34. Nearly always does things when told, vs. often resists adult requests or commands (—.21).

On the left side there is to be inferred, rather than directly read, the general quality of cheerful complaisance, cooperativeness and adaptability characteristic of the cyclothyme pole of factor *A* (4). The negative pole has a little more emphasis on jealous and "paranoid" than is usual in *A*(—) and does not directly show sufficient loading on reserved, rigid, cautious and secretive. However, we have "solemn," "resists adult requests" and a loading of .14 in the right direction on "secretive." Nevertheless, in view also of the failure of *L* (protension or paranoia) in this series, the hypothesis must be entertained that, due perhaps to one factor too few being extracted, the small-variance factor *L* has attached itself to the very similar "cooperative" loading pattern of *A*, in a single factor. On the other hand, the only early childhood pattern previously recorded in this area, by Koch (13), had been matched (2) with *A*(—), and this had highest loadings in pouting and sulking and in physical attack on other children, agreeing well with the present identification with *A*(—).

Factor 6. Oldest-Child, Parental-Training Pattern

57. The oldest child, vs. not the oldest child (+.59),
58. Not a middle child, vs. a middle child (—.48),
31. Toilet trained earlier than most children, vs. toilet trained later than most children (—.40),
52. Good bowel control, never soils self, vs. faulty bowel control, soils self (+.32),
29. Learned to talk earlier than most children, vs. learned to talk somewhat late (+.30),
51. No bed-wetting, vs. frequent bed-wetting (+.30),
7. Cries more than most children, vs. rarely cries (+.26),
10. Talks in a rather loud voice, vs. talks in a rather quiet voice (+.26),
6. Less active than average, vs. always on the go, tends to be overactive (+.25),
13. Tires fairly quickly, vs. has unusual physical endurance (—.25).

From the nature of the variables we suspect that this should be considered not so much a general personality dimension as a set of relatively specific habits associated with being the oldest child, as distinct particularly from a middle child. The higher loadings involve habits considered acceptable adjustments by the parents, and the successful imposition suggests that the amount of parental contact and training given the first child is greater than with later children and tends to establish the required habits relatively firmly and early. Conceivably the "discouraged" responses at the lower loadings, tiring easily and crying easily, are reflections of the conflict introduced by the training, or of later displacement by younger children.

Factor 7. Ego Strength-vs.-General Emotionality (C)

17. Never tells lies, vs. fairly often tells deliberate untruths (+.56),
28. Seldom or never has temper tantrums, vs. has frequent temper tantrums (+.39),
27. Never has headaches, vs. often has headaches (—.36),
33. Seldom or never shows off, vs. likes to show off, often calls "Look at me" when not doing anything outstanding (+.35),
50. Seldom or never jealous, vs. tends to be jealous of other children (+.33),
18. Never takes anything that belongs to someone else, vs. has stolen things on several occasions (—.32),
26. Has frequent colds, vs. seldom or never has colds (+.29),
2. Seldom or never intentionally destroys property, vs. more destructive than average (—.27),
41. Plays mostly with children of own sex, vs. plays mostly with children of opposite sex (—.21).

As pointed out under Factor 3, this and 3 seem to constitute the closely allied factors *G* and *C*. While there is not the least doubt about finally identifying Factor 3 as the *G* pattern, there are some slight discrepancies here from the usual ego strength pattern as previously so classified (2) from the data, especially, of Hart and Jenkins (10), McDonough (14) and Eysenck (8). In the first place this has less variance than usual (seventh

instead of third rank) and in the second it stresses regard for ethics a little more than stability and realism. The first discrepancy can readily be understood in terms of the known hereditary contribution (4) to *C*, which would reduce the within-family variance here. The second is almost certainly due to a true modification of the pattern as we proceed to earlier ages, as already evidenced by Burt's analysis (2). These suggest that the instability of *C*— shows itself in younger children in more overt disturbances, particularly in expressions of what Burt calls the sthenic emotions (anger, assertiveness, sex and sociability), which would register as anti-social and anti-ethical, but through no particular interindividual variance in ethical teaching. The possibility of some intrusion of ethical valuation also arises because of the probability that a low *C* child is in fact being rated by a low *C* parent, allergic to breaking of ethical rules (4).

This analysis adds, besides the above change of emphasis, "headaches," presumably a result of the autonomic upsets and the beginning of the hypochondria observed in the pattern later (4), and "tendency to play with children of opposite sex."

Factor 8. Dominance-vs.-Submissiveness (E)

8. Complains a lot, hard to satisfy, vs. rarely complains (+.46),
4. Has practically no fears at all, vs. has many fears, for example, of the dark, of animals, strangers, doctors, etc. (+.41),
21. Has no fear of the dark, vs. afraid of the dark (+.34),
28. Has frequent temper tantrums, vs. seldom or never has temper tantrums (—.34),
43. Adventurous, bold, willing to take a chance, vs. very retiring, cautious (—.31),
19. No fear of any animals, vs. very much afraid of one or more animals (+.26),
14. Speech is unusually fluent, vs. stutters or stammers fairly often (—.25),
20. Has no fear of strangers, vs. generally fearful of strangers (—.25),
29. Learned to talk somewhat late, vs. learned to talk earlier than most children (—.25),
34. Often resists adults requests or commands, vs. nearly always does things when told (+.24),
11. Sulks or pouts more than most children of same age, vs. seldom or never sulks or pouts (+.23).

This factor has been rather difficult to separate from factors 4, 5, and 11, i.e., *A*, *O* and *I*; but it should be noted that there has been difficulty in separating *E* from *A* in earlier studies. The general sense of the factor as a dominance pattern is unmistakable. The child is not afraid of anything, is bold and willing to take a chance, resists adult requests and makes a direct expression of complaints. The element of doubt arises from the possibility that it could be *H* factor rather than *E*, because of the emphasis on "unafraid"—but *H* has already been recognized in this series—and from the fact that variable 30, direct "bossiness," has only a moderate loading here. It is possible—even probable—that some better simple structure position

remains to be found, especially through rotations of *E* on 11 and 5, which will raise assertiveness and lower fearlessness. However, on the other hand, dominance is a pattern which we should expect on theoretical grounds to vary a good deal with age, and which we already know on empirical grounds changes rather markedly in other circumstances, e.g., according to the sex of the sample. It is perhaps reasonable to suppose that a dominant disposition placed in the dependent situation and more threatening world of the young child will show itself more in fearlessness, temper tantrums and complaints than in successful expressions of social dominance. In previous factorings of dominance, in the child range, disobedience and anti-social behavior have been rather more prominent than here.

Factor 9. Autia (M) (Possibly with (K))

47. Very imaginative, vs. very practical-minded (—.44),
35. Daydreams a great deal, vs. seldom or never daydreams (+.37),
32. Has a very happy, cheerful disposition, laughs a great deal, vs. rather solemn, does not laugh very much (+.32),
1. Prefers to play with older children, vs. prefers to play with younger children (+.30),
21. Afraid of the dark, vs. has no fear of the dark (—.29),
29. Learned to talk earlier than most children, vs. learned to talk somewhat late (+.28),
37. Very affectionate, spontaneously hugs or kisses when meeting or saying goodbye to others, vs. does not show much affection (+.27),
23. Never sucks thumb, vs. often sucks thumb (+.25),
13. Has unusual physical endurance, vs. tires fairly quickly (+.25),
5. Talks a great deal, something of a "chatterbox," vs. rather quiet (+.24),

If this factor had not occurred in a series which already contained the surgency-desurgency factor, number 12 below, one could be tempted to conclude that its emotional expressiveness and spontaneity express the surgency pattern. However, the high loadings of imaginativeness and daydreaming do not fit the surgency pattern very well and there is some question whether variable 21, fear of the dark, and 37, affectionateness, have previously been sufficiently proven part of the surgency pattern. While the combination of cheerful disposition, talkativeness, and energetic endurance make it impossible to deny surgency as an alternative hypothesis, the fact that an almost identical pattern with the present has also been found in teacher ratings (6), again distinct from *F*, Surgency, suggests that we must proceed in a radically different direction. Two factors, not located elsewhere in either series, have strong and, in the present state of knowledge, almost equal claim. These are *K*, Comention or socialized, intellectual interest, and *M*, Autia, or emotional-intellectual and esthetic interests. The former has "love of school" central to it, and has been mistaken for intelligence. The latter, previously found only in adults, is there characterized by high imaginativeness, unconventional self-sufficiency, and intellectual interests—and at the opposite pole by practicality, matter-of-fact realism and self-control and narrower interests.

The present pattern is nearer *M* than *K*; but the equivalent teacher-rating pattern (6), with its greater emphasis on classroom virtues, respect for property etc., could equally be *K*. It is understandable that the more intimate parental relation would bring out the higher role of imaginativeness and free creative daydreaming. In any case, a good *K* pattern already exists in this series (factor 10). Assuming factor 9 is *M*, it throws a wealth of new light on that hitherto enigmatic "bohemian, imaginative, impractical" pattern in adult behavior, stressing now its subjective, creative, emotional and, indeed, lyrical qualities, [and, incidentally, accounting for its significantly higher value in researchers and artistically creative students (*see* Cattell and Drevdahl in (4)].

Factor 10. Comention-vs.-Abcultion (K)

14. Speech is unusually fluent, vs. stutters or stammers fairly often (—.51),
26. Seldom or never has colds, vs. has frequent colds (—.40),
25. Never has eliminative disturbances, vs. often has eliminative disturbances, diarrhea or constipation (+.36),
15. Pronounces words with unusual precision and clarity, vs. pronounces rather poorly, speech often difficult to understand (—.35),
46. Excellent health, vs. ill fairly often (—.35),
38. Will eat nearly anything, vs. somewhat fussy about food, will eat only certain things (+.29),
6. Always on the go, tends to be overactive, vs. less active than average (—.27),
29. Learned to talk earlier than most children, vs. learned to talk somewhat late (+.23),
27. Often has headaches, vs. never has headaches (+.22),
36. Unusually sociable, seeks company of other children, vs. often prefers to play alone (—.20).

The *K* pattern, found with some fluctuation in adult population samples, has stood out strongly in certain child groups, particularly in the questionnaire area. The name is intended to imply a cooperative attitude towards conventional learning, as opposed to a rigid resistance to the culture pattern. Typically, it has a liking for school, an interest in cultural values, a willingness to do the right thing, e.g., in table manners, and a regard for social obligations, especially at the level of manners. This "intellectual striving" is probably consistent with a fairly stable family environment in which social stimulation is directed towards educational accomplishment, likely to show itself in the language development. Previous work has shown it to be quite independent of general intelligence (4). Additions to knowledge of the pattern here are the emphasis on speech articulation and fluency, and on good health.

Factor 11. Premsia-vs. Harria, Femininity Contribution (I)

59. Sex of child—female, vs. male (—.58),
43. Very retiring, cautious, vs. adventurous, bold, willing to take a chance (+.36),
53. Often has nightmares, vs. rarely or never has nightmares (—.36),

4. Has many fears, for example, of the dark, of animals, strangers, doctors, etc., vs. has practically no fears at all (—.25),
13. Tires fairly quickly, vs. has unusual physical endurance (—.25),
6. Less active than average, vs. always on the go, tends to be overactive (+.24),
27. Often has headaches, vs. never has headaches (+.24),
25. Often has eliminative disturbances—diarrhea or constipation, vs. never has eliminative disturbances (—.23),
2. Seldom or never intentionally destroys property, vs. more destructive than average (—.21),
41. Plays mostly with children of own sex, vs. plays mostly with children of opposite sex (—.21),
48. Very neat, tidy, orderly, vs. untidy, careless about appearance of self and belongings (+.20).

This factor has obviously the character of feminine sensitivity versus masculine toughness. There seems no alternative but to identify it with the *I* factor, long considered (4) the embodiment of William James' tender-vs.-tough-minded continuum. However, there is a complication because we discover one *I* factor associated with femininity, and one not so associated. This sort of duplication constitutes a systematic problem in intra-familial ratings.

Factor 12. Surgency-vs.-Desurgency: Favored-Position Contribution (F')

56. The youngest child, vs. not youngest child (+.49),
49. Very frank, expressive, vs. secretive, keeps many things to self (—.38),
57. Not the oldest child, vs. oldest child (—.35),
6. Less active than average, vs. always on the go, tends to be overactive (+.30),
22. Never bites fingernails, vs. often bites fingernails (—.26),
5. Talks a great deal, something of a "chatterbox," vs. rather quiet (+.26),
27. Never has headaches, vs. often has headaches (—.25),
32. Has a very happy, cheerful disposition, laughs a great deal, vs. rather solemn, does not laugh very much (+.25),
58. Not a middle child, vs. a middle child (—.22),
35. Seldom or never daydreams, vs. daydreams a great deal (—.21),
47. Very imaginative, vs. very practical-minded (—.21).

With one exception, variable number 6, this is undeniably the pattern of surgency-vs.-desurgency. The reader will recall from the discussion of factor 9 above that this makes two surgency-like factors in one series, a situation which has been met and commented on before (4). In this case the main factor is tied up with the family position while the former suspected pattern was not. Since we know that surgency is largely environmentally determined, and, indeed, is the product of a secure and indulgent environment (4), it makes sense that the family position should play such a role and have such a loading. This must carry the definite assumption for future investigation that in the modern, limited family, the youngest tends to occupy a benignly favored position, relatively protected from responsibilities and standards. Since surgency decreases with age (4) some of the correlation could be due to age alone. Incidentally, in this factor

and any others where a variable of 100 per cent reliability is mixed with ratings of less than perfect reliability it will be understood that the former is boosted to a position in the factor pattern which must be discounted to get proper perspective. The pattern is essentially one of surgency-desurgency, with some age and position correlation thrown in. The only novelties are the "less active than average" and "seldom bites fingernails," which fit the basic interpretation of the "placid" surgency previously made (4) as a carefree "ease," resulting from fewer environmental demands and responsibilities.

Factor 13. Only Child Pattern

55. Only child, vs. not an only child (—.51),
56. Not the youngest child, vs. the youngest child (—.51),
2. Seldom or never intentionally destroys property, vs. more destructive than average (—.29),
39. Demands much attention and help from parents, vs. self-sufficient, prefers to be on his own (—.26),
18. Never takes anything that belongs to someone else, vs. has stolen things on several occasions (—.25),
38. Will eat nearly anything, vs. somewhat fussy about food, will eat only certain things (+.20).

This pattern agrees with most research done on the only child, showing more correct, but also more dependent, behavior. This scarcely has the magnitude of a primary personality factor, however, for the loadings except for the positional variables 55 and 56 are very modest. It is a minor, and possibly transient, pattern associated with the only child's position.

Factor 14. Premsia-vs.-Harria (1)

16. Willing to go to bed, perhaps even slightly eager to do so, vs. a little difficult at bedtime, generally resists going to bed (+.43),
23. Never sucks thumb, vs. often sucks thumb (+.41),
52. Good bowel control, never soils self, vs. faulty bowel control, soils self (+.30),
8. Complains a lot, hard to satisfy, vs. rarely complains (+.26),
49. Very frank, expressive, vs. secretive, keeps many things to self (—.25),
30. Seldom or never orders others about, vs. a little bossy, likes to tell others what to do (+.23),
39. Demands much attention and help from parents, vs. self-sufficient, prefers to be on his own (—.21),
48. Very neat, tidy, orderly, vs. untidy, careless about appearance of self and belongings (+.21).

Although this is clearly some factor of properness and fastidiousness, its identification with the *I* factor is not too certain, principally because one can see superego or *G* factor components. However, it has two of the main markers, plaintiveness and demandingness, of the *I*+ factor, together with the fastidiousness. Moreover, it suggests as a whole that over-protectiveness of the child, which we have considered theoretically to be the essential source of the premsia pattern (4).

Factor 15. Ergic Tension (Q4) (or possibly (D))

25. Often has eliminative disturbances—diarrhea or constipation, vs. never has eliminative disturbances (—.51),
24. Often has stomach upsets, vs. never has an upset stomach (—.40),
12. Falls or gets hurt fairly often, vs. seldom or never has an accident or gets hurt (—.33),
50. Seldom or never jealous, vs. tends to be jealous of other children (+.32),
22. Often bites fingernails, vs. never bites fingernails (+.25),
42. Has many fights with other children, vs. never gets into fights (—.23),
27. Often has headaches, vs. never has headaches (+.22).

This pattern is definite enough, but the only pattern seen before to resemble it closely is that in the questionnaire factor Q_4, or ergic tension (4). Either the child is living in an atmosphere of excessive ergic stimulation, including stimulation of anxiety, or else is constitutionally unduly reactive autonomically. In both cases the result seems to be a psychosomatic tension generated by insufficiently discharged drive level, as defined in Q_4. However, in future research the hypothesis must also be entertained that this is the *D* factor (4) of excitability and insecurity.

Factor 16. Insecurity from Physical Handicap

54. Child has physical defects or handicaps, vs. child does not have any physical defects or handicaps (+.39),
2. More destructive than average, vs. seldom or never intentionally destroys property (+.29),
30. Seldom or never orders others about, vs. a little bossy, likes to tell others what to do (+.29),
59. Sex of child—male, vs. female (+.28),
41. Plays mostly with children of opposite sex, vs. plays mostly with children of own sex (+.26),
31. Toilet trained later than most children, vs. toilet trained earlier than most children (+.25).

Again we have a factor of relatively minor variance, but one which seems understandable in terms of an insecurity, or perhaps immaturity, pattern generated by physical handicap. The very slight sex association may simply spell the greater insecurity-creating effects of physical handicaps occurring in male children.

Summary

Behavior ratings were obtained from the parents of 145 first- and second-grade children. Sex, grade, and age were added to the rating variables making a total of 61 variables which were intercorrelated. After an initial factor analysis of the phi matrix, communality estimates were revised, and a second factor analysis was done. Rotation was performed initially on 15 factors, but when a hyperplane for a sixteenth appeared it also was incorporated.

The factors have quite good simple structure, as shown by the percentage of variables in the hyperplane, and contain sufficient variables sampled from the personality sphere to permit tolerably exact matching procedures and conclusions with respect to other studies. However, the present matches are to be considered tentative rather than final, because they have later to be considered in relation to four or five other studies on the 6- and 7-year-olds and 4- and 5-year-olds which are now in process of analysis. Furthermore, the interpretation must be considered with due regard to whatever distortions may arise from the rating done by parents, mainly mothers, who necessarily will interpret certain terms a little differently from a peer group and who will in any case be dealing primarily only with a range of variance within their own families. Allowing for such distortions, there seems to have been remarkably little difficulty in interpreting 10 (and possibly 12) of these factors in terms of well known primary personality factors. These factors, expressed in their usual alphabetical symbols indicating order of declining variance, are *A, B, C, E, F, G, H, I, K, O* and possibly *M* and Q_4. This leaves the hypothetical factors *D, J* and *N* overlooked. *D* has always been a difficult factor to locate because it affects so much of personality that it leaves very little in the hyperplane, and the paranoid factor, *L*, may be compounded with *A* or it may be a pattern which develops much more with age and is not evident so much in young children, as we definitely suspect with *N*.

The chief additions to our present knowledge are:

1. That the personality factor structure in younger children does not appear to be noticeably less complex than for adults, involving about the same number of factors.

2. That the identical primary personality factors recognized in adults and 11-year-old children also seem in the main recognizable in 6- and 7-year-old children.

3. That, in addition to the primary personality factors, one can recognize certain habit collections specifically associated with the sex of the child and the family position. These are of small variance, and in two cases they seem to operate in producing changes along personality dimensions already defined in independence of these specific influences. Notably femininity seems to produce a component highly similar to the premsia or sensitivity factor, *I*, and the youngest position in family tends to help the formation of the surgency, or *F*, pattern.

4. That certain slight differences of emphasis appear to exist between the adult and child patterns which, if verified by further research, have considerable importance for the understanding of developmental processes.

The relation of these *L*-data factors (4) to questionnaire (*Q*-data) and objective test (*T*-data) factors, and to patterns derived from independent raters will be more systematically and exactly studied when the contributory specialized studies have been published.

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THE STATUS OF ADOLESCENTS IN AMERICAN SOCIETY: A PROBLEM IN SOCIAL IDENTITY[1]

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Adolescents occupy an ambiguous position in American society. As a phase in personal and social development adolescence is a recognized period experienced by every American youth. As a status in the social structure, however, it is loosely defined at both entry and exit transition points and offers a set of vague and often conflicting roles. The age behaviors expected of adolescents by adults are viewed by society with ambivalence and anxiety. With the possible exception of old age, no other phase of individual development is so clearly marked by negative connotations and lack of positive sanctions.

It is obviously one of the central objectives of socialization to bring pre-adult members to equal status in the adult society. However, the difficulty of achieving this transition is affected by the subordinate individual's perception of the relative position of his status group in the structure of the society and by the attitudes of adults and their willingness to permit expressions of autonomy on the part of subordinate members.

Although there has been little systematic research on the status of adolescents in American society, as viewed by adults or by adolescents themselves, it is generally assumed that the attitudes of the society toward its teen-age members are characteristically depreciatory and often hostile. Our preliminary interviews with adolescents revealed their awareness of a presumed inferior reputation among adults. Adolescents frequently expressed the belief that they are, as a group, subject to condemnation, criticism and general devaluation by adults and that there exists among adults a stereotype of adolescents as sloppy, irresponsible, unreliable, inclined toward de-

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structive and anti-social behavior. It was the objective of our research to explore the evaluation of adolescents by both teen-agers and parents and the relationship between opinions of parents and teen-agers within the same family.

Research Procedure

The Instrument

To obtain evaluations of adolescent and adult reputations, a set of rating scales of 20 pairs of adjectives was constructed. These pairs were selected from comments offered by teen-agers and adults in interviews about the problems of parent–teen-ager interaction. The adjectives represent socially desirable aspects of character and personality, and define in part the standards toward which the middle-class child is directed by his elders and, to a lesser extent, the terms in which the adolescent evaluates himself. The members of each pair can be viewed as positive and negative ends of a specific behavior continuum. Each pair of adjectives was set up on a seven-point scale, 7 representing the highest, or most desirable, rating, and 1 the lowest (*see* Table 1).

Testing Procedure

Each subject was asked to use the scales in making ratings on (a) the "average teen-ager," (b) the "average adult," (c) "teen-agers" from the viewpoint of an adult, and (d) "adults" from the viewpoint of an adult. This resulted for each adolescent in a set of ratings on teen-agers and adults and his prediction of the manner in which teen-agers would be rated by adults.[2] Similarly, each parent was instructed to rate (a) the average "teen-ager," (b) the "average adult," (c) "teen-agers" from the viewpoint of a teen-ager, and (d) "adults" from the viewpoint of a teen-ager.

The testing procedure gave rise to the following sets of data:

A. Actual evaluation of own status group, or "self-rating"
   1. adolescents' rating of teen-agers
   2. parents' rating of adults

B. Evaluation of the other status group, or "actual reputation"
   1. adolescents' ratings of adults
   2. parents' rating of teen-agers

C. Predictions of how the other status group would rate own status group, or "expected reputation"
   1. adolescents' predictions on how adults would rate teen-agers
   2. parents' predictions on how teen-agers would rate adults

[2] The rating scales were administered twice over a three-week interval to a group of six adolescents. Ninety two per cent of the scores shifted only one scale step or less from the first to the second administration of the scales.

D. Predictions of how members of the other status group would rate themselves, or "predicted self-rating"

1. adolescents' predictions of how adults would rate adults
2. parents' predictions of how teen-agers would rate teen-agers

Sample

Ratings were collected in conjunction with an interview study of 32 families, a study concerned with exploring beliefs and attitudes about teen-agers as these affect parent-child relationships during the adolescent period. The sample was composed of 32 adolescents, 16 boys and 16 girls, and 54 parents, 30 mothers and 24 fathers. In each family, interviews and rating scales were administered to the mother and her teen-age child. The father was interviewed in slightly more than one-half of the families. However, whenever possible, rating scales were obtained from fathers, even if they were not accessible for interviewing. All interviews were taken in the home and the rating instrument was administered in the course of the interview.

The families in the sample were upper-middle and middle class in a metropolitan area. Twenty-three of the families were Protestant, one was Catholic, and seven were Jewish. There was one mixed marriage, Protestant and Jewish.

Average age of the boys was 15.9 years; the average of the girls, 15.5 years. The average high school grade of both boys and girls was 2.8. Two of the adolescent subjects attended private, non-denominational schools, one attended a parochial school, and the remaining 29 were enrolled in a public high school.

Findings

Perception of the Status Difference between the Two Groups

Ratings of the Two Groups on "The Average Teen-Ager"

Both adolescents and parents rated teen-agers in a mildly favorable manner. Fifteen of the ratings by adolescents fell above the scale mean (4.0) and five below (Table 1). The mean rating that adolescents gave to teen-agers, on all items, was 4.38. Parents rated teen-agers above the scale mean on 14 of the items and below on six (Table 2). Expected differences between the ratings of parents and those of adolescents did not emerge. Only three of the differences between adolescent and parent ratings were statistically significant at the .05 level of confidence (items 1, 7, 13). On one of these, the moral-immoral continuum, the parents gave teen-agers a significantly higher (more positive) rating than did the adolescents themselves.

Ratings by the Two Groups on "The Average Adult"

Both adolescents and parents believe that adults are superior to the teen-ager on all but one (item 13) of the 20 characteristics. Not only did both groups rate the adult more favorably than they rated the teen-ager,

TABLE 1

MEAN ITEM RESPONSE BY ADOLESCENTS

Traits	Ratings of		Predictions of Adults' Ratings of	
	Teen-Agers	*Adults*	*Teen-Agers*	*Adults*
1. Neat–untidy	4.81	5.88	3.17	5.68
2. Patient–impatient	2.94	4.72	2.23	5.06
3. Cooperative–uncooperative	4.59	5.38	3.37	5.86
4. Serious–frivolous	4.50	5.56	2.70	5.41
5. Responsible–irresponsible	4.62	6.22	2.76	6.07
6. Courteous–rude	4.81	5.81	3.17	5.83
7. Mature–immature	4.62	6.06	2.87	6.00
8. Cautious–impulsive	2.69	5.44	2.10	5.28
9. Consistent–inconsistent	3.56	5.44	2.37	5.76
10. Grateful–ungrateful	4.81	5.72	3.00	5.83
11. Reliable–unreliable	5.19	5.97	3.40	5.93
12. Stable–unstable	4.35	5.47	2.90	5.93
13. Moral–immoral	5.16	5.53	3.80	5.79
14. Self-directed–easily influenced	3.72	5.28	3.17	5.68
15. Respectful–disrespectful	4.78	5.75	3.37	5.79
16. Unspoiled–spoiled	3.97	5.03	2.67	5.72
17. Considerate–inconsiderate	4.44	5.62	3.07	5.83
18. Self-controlled–wild	4.59	5.88	2.80	6.11
19. Thoughtful–thoughtless	4.66	5.66	3.13	5.86
20. Loving–angry	4.81	5.69	3.60	5.72
Means	4.38	5.60	2.80	5.71

but the adolescent subjects gave much higher mean ratings to adults than did the parents. The mean rating on all items by adolescent subjects was 5.60; that of the parents was 4.86. Adolescents rated adults higher than did the parents on each of the 20 items. Sixteen of these item differences were statistically significant. Only items 4, 8, 13, and 19 showed insignificant differences.

The Extent of Perceived Differences between Teen-Agers and Adults

The difference between each group's rating of teen-agers and its rating of adults (Tables 1 and 2, col. 2 minus col. 1) can be considered an expression of the distance in status as it is differently perceived by the two groups. It has already been noted that teen-agers are rated in a mildly favorable manner by both groups, and that adults are believed to be superior to teen-agers. However, adolescents accentuate in their ratings the relative superiority of adults over teen-agers. In scale terms, the distance between adults and teen-agers is perceived by the adolescents to be almost twice as large as that seen by parents.

TABLE 2

MEAN ITEM RESPONSE BY PARENTS

Traits	Ratings of		Predictions of Teen-Agers' Ratings of	
	Teen-Agers	*Adults*	*Teen-Agers*	*Adults*
1. Neat–untidy	3.98	5.00	4.93	5.00
2. Patient–impatient	2.48	3.69	5.14	2.58
3. Cooperative–uncooperative	4.45	4.84	5.96	3.84
4. Serious–frivolous	4.80	5.20	5.62	5.82
5. Responsible–irresponsible	4.87	5.24	6.02	6.09
6. Courteous–rude	4.44	4.86	5.48	4.30
7. Mature–immature	3.98	5.02	5.60	5.36
8. Cautious–impulsive	2.72	4.78	4.11	5.18
9. Consistent–inconsistent	3.57	4.18	5.53	3.18
10. Grateful–ungrateful	4.59	4.82	5.60	3.66
11. Reliable–unreliable	4.98	5.10	5.91	4.93
12. Stable–unstable	4.45	4.76	5.64	4.98
13. Moral–immoral	5.98	5.46	5.87	5.51
14. Self-directed–easily influenced	4.18	4.32	5.85	5.18
15. Respectful–disrespectful	4.50	5.22	5.56	4.70
16. Unspoiled–spoiled	3.70	4.31	5.54	4.22
17. Considerate–inconsiderate	4.22	4.78	5.66	3.77
18. Self-controlled–wild	4.62	5.34	5.32	5.16
19. Thoughtful–thoughtless	4.09	5.24	5.54	4.49
20. Loving–angry	4.83	5.14	5.32	4.57
Means	4.27	4.86	5.51	4.63

These differences apparently represent the different concerns of the two groups. Both groups share the opinion that teen-agers have a relatively long way to go before they reach the adult level of self control. However, the adolescent subjects seem to feel that they are much less "responsible" and less "self-directing" than adults, while the parents seem relatively unconcerned about these characteristics.

Expected Reputation

The Attempt to Predict the Ratings of the Other Group

The adolescent's view of his status in the social system is a function of the reputation he anticipates from adults as well as his own view of his age group. It is significant, then, that the adolescents of our sample predict that teen-agers will be evaluated in a generally unfavorable manner by the adult group.

All of the ratings which the adolescent subjects anticipate will be given to teen-agers by adults fall below the scale mean (Table 1, col. 3). Adolescents expect that the lowest ratings will describe them as impulsive,

impatient, inconsistent, spoiled, frivolous, irresponsible, and wild. In contrast to the unfavorable reputation adolescents believe the teen-ager has, the parents in the sample believe that their own status group has a mildly favorable reputation among teen-agers.

Disparity between Expected Reputation and Self-Ratings

The difference between the adolescents' own rating of teen-agers and their predictions of the average adults' rating of teen-agers can be regarded as a measure of the extent to which teen-agers will feel underrated or depreciated. The data indicate that adolescents expect to be underrated on each of the items. On 18 of the items (all except 8 and 14) the difference between self-ratings and expected ratings is statistically significant (Table 1). By contrast, parents predict that teen-agers will significantly underrate adults on only six items (2, 3, 9, 10, 17, 19; Table 2, col. 2 minus col. 4).

The items on which the parents feel that adults will be underrated can be seen as relating to tension in interpersonal relationships. However, parents believe that qualities of maturity which are relatively independent of interpersonal relationships will either be accurately perceived by the teen-ager or even overrated. These ratings suggest that parents feel they will be seen as mature but unsympathetic or ill-intentioned in interpersonal affairs. They feel that they will be seen as more "uncooperative," "ungrateful," "impatient," and "thoughtless" than they really are.

Ratings Indicating Expected Perception of Status Differences

Predictions of the Self-Ratings of the Other Group

The disparities already mentioned are emphasized by the belief each group has about the ratings which they think members of the other group will give themselves. Two sets of predictions are involved: the adolescents' predictions of how adults will rate themselves, and the parents' predictions of the ratings teen-agers will give themselves (Table 1, col. 4; Table 2, col. 3). Both groups believe that members of the other status group will have very favorable opinions of themselves. Parents predict that teen-agers will rate themselves above the scale mean on all items. Adolescents believe that adults will rate themselves above the mean on all items. The difference between the two sets of predicted self-ratings is very small.

Disparity between Predicted Self-Ratings and Own Ratings

The parents' predictions of the teen-ager's favorable opinion of himself represents a belief that teen-agers will overestimate themselves on the traits in question, since the parents themselves give a generally lower rating to teen-agers. In contrast the adolescent expects that parents will see themselves in the same favorable light as he sees them. In effect, teen-agers are expressing confidence in the parents' judgment, even when the parents are evaluating themselves. By the same rationale, parents expect that teen-agers

will be conceited, or, at best, unrealistic when judging themselves. This expectation is expressed by significant differences on 17 of the 20 items (exceptions are 13, 18, and 20; Table 2, col. 1 minus col. 3). There is only one reversal: parents say that teen-agers will underrate themselves on "moral" behavior.

Comparison of the rank ordering of items revealed that parents believe teen-agers will emphasize items having to do with readiness for emancipation from parental control. Such items as "responsible," "mature," "consistent," "stable," and "self-directed" rank higher in the predicted self-estimate than in the parents' ratings of adolescents. In complementary fashion, parents expect that adolescents will rate themselves *relatively* low on "self-controlled," "cautious," "neat," and "patient." This indicates that these parents believe that teen-agers think of themselves as ready to lead their own lives—but along rather hedonistic lines.

The Expected Perception of Status Difference

A measure of predicted status differential between the two groups may be obtained by a comparison between the view the adolescent has of his reputation with adults and the view he thinks adults will have of themselves. This is the teen-ager's prediction of his relative status in the eyes of the adults.

Considered in these terms, the data show that *adolescents think adults will see themselves as vastly superior to the average teen-ager* (Table 1, cols. 3 and 4). Further, adolescents predict that adults' opinion of the status difference will be much greater than adolescents believe it is (Table 1, cols. 1 and 2 compared with cols. 3 and 4).[3]

Parental Attitudes and the Ratings by Own Teen-Agers

It was assumed that the ratings given by adolescents to the "average adult" and to the "average teen-ager" were not unaffected by the attitudes encountered in their own family experience. The ratings of parent-child pairs were examined, therefore, to determine the degree of association between mother-child pairs and between father-child pairs.

The resulting coefficients offer evidence that the mother's attitudes are more influential than the father's in determining the attitudes of the teen-agers. The mother's perception of status difference (Table 2, col. 2 minus col. 1) correlates significantly with the extent to which her teen-

[3] An indication of the characteristic adolescent attitude toward their status in adult minds is seen in the relatively small range that appeared in the predicted ratings. In rating their own group and the adult group, the range between highest and lowest mean rating is three scale steps; in the predicted ratings this range is two scale steps. The adolescents, then, are predicting that the average adult will show little discrimination in evaluating teen-agers and will underrate them even on traits on which the teen-agers feel most competent and acceptable. The parents do not make a comparable assumption in the ratings they expect from teen-agers.

agers feel underrated (Table 1, col. 1 minus col. 3). That is, the larger the status difference that the mother perceives between adults and teen-agers, the lower the reputation that her adolescent predicts teen-agers have. This relationship is highly significant and holds for both mother-daughter and mother-son pairs (Table 3). However, the father's perception of the adult–teen-ager status difference appears to have virtually no effect upon the attitudes of his children as indicated by insignificant coefficients with both sons and daughters.[4]

TABLE 3

COEFFICIENTS OF ASSOCIATION (TAU) BETWEEN THE RATINGS OF PARENTS AND OWN CHILDREN

	Children Expectation of Underevaluation (Table 1, col. 1 — col. 3)			
	Girls	*N*	*Boys*	*N*
Parents: Perception of Status Difference (Table 2, col. 4 — col. 1)				
Mother	.55*	(13)	.59*	(13)
Father	.13	(11)	.00	(10)

* $p < .01$.

Although adolescents appear to be sensitive to their mothers' evaluations, their own ratings of teen-agers are relatively independent of parental opinion. The comparison between the ratings of parents and their children on the "average teen-ager" reveals no significant association between adolescents and either father or mother (Pearson r's of .062 and .067 respectively). The teen-ager's feeling about his group's reputation among adults thus appears to be determined in part by the attitudes of his own mother toward teen-agers as a group but he resists her influence in making his evaluation of his own group.

SUMMARY OF FINDINGS

1. Adolescents and parents agree in expressing mildly favorable opinions of teen-agers.

2. The adolescents tend to idealize adults, i.e., they have much higher opinions of adults than do the parents.

3. Adolescents see a relatively greater status difference between teen-agers and adults than do the parents.

[4] The attitudes of fathers about teen-agers are significantly related to those of the mothers in the sample (Pearson $r = .44$) but their perception of the status difference between the two groups is not (Pearson $r = .18$).

4. Adolescents believe that the average adult has a generalized tendency to depreciate teen-agers. They feel that teen-agers have a uniformly low reputation among adults.

5. Parents anticipate that teen-agers will have a selective tendency to undervalue adults. They predict that adults will get lower ratings than they merit on items which refer to interpersonal relationships, but that they will be accurately evaluated on non-interpersonal maturity items.

6. Adolecents believe that the adults will evaluate themselves relatively accurately.

7. Parents believe that teen-agers have unrealistically high opinions of themselves.

8. Both adolescents and parents believe that the status difference between teen-agers and adults will be distorted to approximately the same extent by the other group.

9. The attitude of the adolescent about the relative status of teen-agers is significantly associated with the opinions of his mother about the adult–teen-age status difference. However, the opinion of his parents is not related statistically to his evaluation of the "average teen-ager."

10. The attitude of the father as expressed in the rating scales is not significantly associated with ratings of his own teen-age children.

Three trends in the data stand out as particularly relevant to parent-adolescent relationships and to theories of adolescent socialization: (a) the agreement between the two groups in their evaluation of teen-agers; (b) the perceptual distortions of both groups in predicting the response of the other group; and (c) the immense status difference between the groups that teen-agers believe exists in the minds of adults. The prominence of these trends emphasizes the difficulties faced by the adolescent in his effort to effect a transition from adolescence to adult roles and behavior.

From their own point of view, the adolescents credit themselves with an acceptable degree of achievement which, nevertheless, places their group in a subordinate position with respect to adults. This willingness to admit a differentiation between their own status and that of adults is in agreement with the views of adults, though it tends to exaggerate the status distance.

The assumption by parents that teen-agers have unrealistically high opinions of themselves is not corroborated by the data obtained from adolescents themselves. This parental belief may, to some extent, simply represent a response to, and acceptance at face value of, a protective bravado and air of competency which the adolescent assumes to protect himself, both from arousing parental anxieties and from his own feelings of inadequacy.

Our data suggest that one of the central problems in parent–teen-ager relations lies not so much in disparity between their respective evaluations of adolescents as in the fact that each group mistrusts or misunderstands the opinions of the other. Parents and adolescents thus interpret teen-age behavior and problems in different, and often contradictory, terms. For the adolescent, teen-age problems are expressed in terms of *ego functions*—

autonomy, self-control and judgment based upon exploratory experience with adult roles. For the parent, the problems of teen-agers are primarily concerned with control of *id impulses* for which, they believe, parental supervision and control are essential. Both views, of course, are to a degree realistic and the families of our study which displayed a minimum of parent-child conflict were those in which parents and teen-agers were willing to recognize the importance of both viewpoints.

The status difference between the groups probably serves a positive socializing function for the teen-ager. A moderate overestimation of the attributes of adults offers a lever for the parent in the socializing process and provides motivation for the adolescent towards increased autonomy and maturity. However, the extreme idealization of the adult by the adolescent, when it is joined with a belief that personal achievements he has made are not recognized by adults, may retard ego development and encourage behaviors which defeat the objectives of both parents and adolescents themselves.

CONSCIENCE AND CONFLICT: THE MORAL FORCE IN PERSONALITY [1,2]

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The characteristics of one's moral code determine how often and in what life situations inner conflict is aroused, influence the ways such conflict is experienced, and set limits on the techniques that can be used to resolve it. The goal of this paper is to convey the theoretical richness of the topic and to clarify some of the research implications. Therefore, we give only a brief outline of our empirical work on the acquisition of moral needs; details of the latter are presented elsewhere (1, 2, 10). Instead, we describe a number of the problems we have encountered in the development of our investigations. The paper closes with a discussion of some hypothetical interrelationships between moral standards and other facets of personality.

In using the concept of "moral needs" we refer to the *internalized* standards, the "voice of conscience," rather than simply societal rules or role expectations to which people may give lip-service without really subscribing. It is common to use the term "superego" in this connection. "Superego" refers to certain learned needs in a person that provide internal reward and punishment regardless of whether the person's actions also provoke positive or negative reactions from other people.

If this definition is accepted, it has meaning for the way we do research. In most actual life situations there is usually a good possibility that an antisocial act will have environmental as well as internal repercussions. As a result, we usually cannot tell from observing a man's behavior how much his inhibitions are motivated by fear or wish for praise, and how much by inner moral forces. Similarly, we cannot tell to what extent his disturbance following a misdeed is caused by fear rather than guilt feeling. In research on superego we need evidence of conformity to a standard regardless of reality pressures, or of guilt following violation of the standard regardless of reality pressures. In practice, this ordinarily means

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[1] This paper was presented originally at the Biennial Conference of the Society for Research in Child Development at Robert Allerton Park, University of Illinois, in April 1955, as part of a symposium entitled "Research on Conflict and Personality."

[2] The viewpoints expressed here were developed and the study mentioned was done in the course of participating in a larger project. Other investigators, who were concerned with aspects of conflict and defense different from those stressed herein, collected additional data on the same subjects. The larger project was directed by Daniel R. Miller and Guy E. Swanson of the University of Michigan, and was supported, in part, by a grant from the National Institute of Mental Health, U. S. Public Health Service. A fuller report of the methods and empirical findings stemming from an application of some of the concepts in this paper will appear in a forthcoming book (10).

[3] Now at Harvard University.

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that we have to create experimentally a plausible circumstance that permits a tempted subject to violate his norm without fear of discovery. There must be neither an *external* advantage to him from conformity, nor an external disadvantage for infraction.

This principle of eliminating risk of getting caught in a moral violation is one of the minimal prerequisites for defining moral standards in accordance with our theoretical conception. It will make easier the task of describing other prerequisites if we first concretize our work by illustrating the kind of research design used and by giving the gist of our findings.

We used a story-completion device as our measure of guilt (1). In each story-beginning the hero violates a commonly held moral standard; for example, he disobeys his mother or has hostile thoughts about a friendly male authority figure. The story is so phrased that the infraction either cannot be detected or cannot be attributed to him unless of course he gives himself up or gives himself away, acts which would in themselves be evidence of a guilt reaction.

Subjects were 112 junior high school boys from a wide range of economic backgrounds in Detroit. Factors such as age, intelligence, religion, race, and ethnicity were controlled. The boys were asked to finish each of the stories, and we coded intensity of guilt from the story-endings. Since we were interested in relating childhood experiences to intensity of guilt, we interviewed the mothers of the boys in their homes concerning the boys' upbringing.

In order to test whether events early in life are factors in moral development, we asked the mothers about their sons' weaning and toilet training. In addition, we inquired into current disciplinary practices. From their reports, we divided the group into those who tended to attack the children directly and those who used "psychological" measures such as reasoning with the child and appealing to his love for the parents.

Our results indicate that it is possible to predict from certain experiences in infancy the moral feelings of children 12 years later. We found significant relationships between intensity of guilt over hostile thoughts and the variables of age of completion of weaning and age of bowel training. Current disciplinary procedures also seem to be connected with guilt over hostile thoughts. The over-all direction of the results indicates associations between high guilt about aggression and early weaning, early bowel training, and psychological discipline. The discipline finding has since been corroborated with a sample of adults (2). But in analyzing the items concerning disobedience of the mother, the results provided us with a puzzling contradiction to the findings for guilt over aggression. High guilt over disobedience was associated with *late* rather than early weaning and *late* rather than early bowel training. A possible interpretation is that guilts in different moral areas may have different developmental origins and that it is unjustified to use a single measure of "guilt" in advancing hypotheses about the genesis of superego. Incidentally, social class was worthless as a predictor of guilt over both disobedience and hostile thoughts.

What are some of the problems in method that had to be resolved in order to do this kind of research? First there is the problem of control of substantive *content*: that is, whether the standard concerns anger, stealing, disobedience or some other value area. A second dimension of moral needs that has to be controlled is the *height* of the standard. This refers to the degree of impulse-expression permitted. For example, one person might be guilty for stealing a three-cent stamp but another might experience no guilt unless he stole a whole sheet of stamps. The *breadth* of a standard is a third dimension that has to be controlled. This takes into account the range of situations in which the standard applies. A broad standard might state, "You must never steal under any circumstances." A narrower one might be, "You must not steal *except* from the rich, or when starving."

A fourth dimension is the *severity* of the standard. Two boys might each have a standard which forbids stealing anything over a dime from one's mother, but if each stole 50 cents, one of them might be much more remorseful than the second. In such a case, the standards are the same in moral area (theft), the same in height (prohibition of anything over a dime), and the same in breadth (from the mother), but differ in intensity—what we call the severity.

In the research we have briefly described we wished to study this last variable, severity. We chose as our measure the intensity of guilt in the subjects' story-endings. In order to be able to interpret the results, we had to keep content, height, and breadth constant. For this purpose, we found the story-completion type of test very satisfactory, since the beginnings can be expanded to include all the details necessary to specify the exact nature of the moral violation as well as to eliminate convincingly any risk of the hero's getting caught. To illustrate the importance of controlling moral area, height, and breadth, suppose we asked a child to finish a story which reads, "Henry steals some money from a man asleep in the park. Nobody sees him do it." Height is not held constant; we cannot know how much money each child imagines it to be. Nor is breadth controlled, because we have not specified anything about the man who is the victim or about the motive for Henry's action in stealing. If we used such an item, we could not be sure of the meaning of the results. Different degrees of guilt in the story-endings might reflect not differences in severity but varying interpretations by the children of the test item.

We have now raised two of the primary considerations in investigating internalized moral needs, the principle of elimination of risk to the violator, and the principle of controlling such factors as height and breadth. A third issue is that there must be some feasible way of measuring guilt. Once a coding scheme was devised, guilt phenomena could be coded reliably and not too arduously from the story-endings. But there is a major complication in inventing a coding scheme for detecting guilt. If subjects were always obliging enough to experience guilt in the form of conscious self-blame they would be very helpful to researchers. Unfortunately, they are sometimes unaware of guilt reactions because of defenses which they use

to avoid unpleasant feelings. When guilt has been pushed out of awareness, it cannot appear as manifest remorse in the story-endings.

How can remorse be recognized when it has been defended against? The way we resolved this dilemma was to assume that since danger of external repercussions has been ruled out by the experimental design, any indication in a subject's story of pain, anxiety, or misfortune experienced by the hero following transgression may justifiably be interpreted as a superego reaction. For example, moral violators may show entirely unrealistic fear of being caught. This is a common defense against guilt in our culture: to avoid awareness of his own self-blame, a person externalizes the conflict by projecting his standards, seeing *someone else* as wishing to blame or punish him. In terms of this reasoning, a man who has misbehaved secretly and becomes afraid that lightning will strike him is as clearly guilt-ridden as the person who says his conscience bothers him. Still other evidences of guilt are attempts to make reparation, to confess, to provoke punishment from others, or to punish oneself. As examples of self-punishment, in our data, the heroes often shot or stabbed themselves "by accident" or deliberately banished or otherwise deprived themselves.

In discussing the research problems we have been facing, we have mentioned several aspects of moral needs. Next we shall discuss briefly both some additional research implications of the dimensions already covered, and the possible fruitfulness of a few other dimensions our group has conceptualized.

In mentioning content, height, breadth, and severity up to now, we have indicated the possibility of studying each of these individually. One could also assess their interrelations. In mapping the constellation of a person's moral needs, it would be necessary to know, for example, that his standards are high and broad, but not severe, in the content area of stealing, and high and severe, but not broad, in respect to sexual inhibitions. Thus in comparing groups, one might want to predict that people with particular child-rearing experiences, or particular religious affiliations, will have distinctive patternings of height, breadth, and severity in given moral areas. Undoubtedly the standards of some individuals are severe in many content areas. Presumably, when some of these standards are contradictory, the conflict is intense since there is no basis for giving one value precedence over another. If telling a lie is as bad as hurting someone's feelings, a person may have difficulty using white lies. It may be healthier to have some hierarchization of moral needs with respect to severity.

Similarly, if within one moral area different heights are associated with very similar degrees of severity—if an adolescent boy becomes nearly as guilty for insulting his father as he would be for murdering him or nearly as guilty for kissing a girl as he would for having premarital intercourse—then discrimination of the relative permissibility of various actions is impaired and the person's adjustment handicapped.

Let us move on to a new aspect of the moral forces. A very fascinating problem is raised by workers like Flugel (6), Fromm (8), and Riesman

(12) who have emphasized the fact that some people are "other-directed," taking as their ethical guide the views of peers or leaders rather than inner standards of their own. Among the possible explanations of such behavior there are at least three that concern the nature of the moral needs: (a) The other-directed person may have *no internalized standards.* To borrow a metaphor from Riesman (12) and Murphy (11), he has no gyro stabilizer to keep him upright through upheavals in the environment. As a result he is influenced solely by expediency. Some anthropologists (3, 9) believe that certain societies (e.g., Japan) are "shame" rather than "guilt" cultures. In shame cultures people respond to external coercion, to role expectations, but have no conscience. (b) A second explanation of other-direction is that the person is "heteronomous" (5). This means that he has *only one internalized standard,* that of doing what is demanded. He is guilty if he does not conform to role requirements, but no kind of action is abhorrent if his peers or leader urge it. (c) Finally, a person who conforms to others' wishes and takes his cues from them may be a very guilt-ridden person—one, consequently, with low self-esteem—who is *oversensitive to approval and disapproval because of his need to defend against his own guilts.* He "projects his superego" (6) so that he sees others as the ones who know what the standards should be. In that way he can avoid awareness that the standards are parts of his own needs. If he then violates one of his own (unconscious) standards, he tries to find someone who will condone the behavior or forgive it or who has done likewise. Seeing that person as approving the behavior constitutes a denial of his own blameworthiness. When no one can be found who approves, the guilty person may find a disapproving superego figure whom he fears and needs to placate. In this way he can continue to see the standard as external and avoid awareness of the intrapsychic conflict. Both varieties of projection of the superego—seeking someone who will approve or someone who will disapprove—lead to dependence on opinions of others. There are several variables implicit in the foregoing discussion and a number of research problems. We have explored the possibility of measuring one of the variables, defense against guilt, and have found promising leads in our data. For example, many subjects react to violation with fear rather than conscious guilt even when the chance of being caught has been eliminated.[4]

There are at least four more aspects of moral needs that can be measured. The first is the *perceived source* of standards. To find out whether they see their standards as "own" or "induced" forces, we asked the junior

[4] An alternative to interpreting unrealitic fear after moral violation as defense against guilt was pointed out to me by John W. M. Whiting and his research group in the Laboratory of Human Development at Harvard. A very angry person with no outlet for the feeling may through projection of the anger perceive others as wanting to punish him even when there is no unconscious guilt. The distinction between the two interpretations can be made experimentally but may prove difficult to uphold in observations of real-life situations or in evaluating interview data that is limited to subjects' reports of their conscious reactions to moral transgressions.

high school boys how they know whether a contemplated action is right or wrong. Some boys told us they "just know," but others, relying apparently on a more external guide, say that in making a moral decision they "think what mother would say." Our results indicate that type of perceived source is related to social class and other indices of social position.

Like or dislike of conscience is another aspect that could be studied. Some people feel burdened by their standards; others take pride in them. One instance of this rejection of standards is the rebelliousness of the adolescent, who may do his best to deny to himself any allegiance to the parents' values. Dislike of conscience may be one of the conditions giving rise to a tendency to defend against guilt.

A related factor is that of the relative *emphasis on ideals as opposed to prohibitions*. Some persons may experience their self-admonitions chiefly in the form of "don't's." Others may phrase theirs in more positive terms: "do well" rather than "don't fail"; "be honest" instead of "don't lie and steal." Conceivably, negative emphasis may be associated with dislike of conscience as well as with the ways the parents have exhorted and rewarded or warned and blamed the child.

Vigilance is still another factor that can be investigated. Some people are on guard all the time—moral needs are salient for them so that these individuals have to serve as "vigilantes" in watching out for possible ethical lapses in their own behavior and often in the actions of others.

With regard to all the dimensions we have mentioned, the degree of generality of each over various moral areas and the interrelations of the factors would need to be determined for a full description of the organization and functioning of a person's moral needs.

However, much broader research problems emerge when we consider moral needs in the context of the entire control system of the personality—that is, in addition to the skills that enable an individual to defer pleasure for greater ultimate gain, to think before acting, to anticipate external dangers, and to defend himself against the internal danger of being overwhelmed by tension from unsatisfied needs. Let us say here that the theoretical formulation we are about to present is offered as a set of hypotheses and arbitrary definitions that may be fruitful for deriving testable propositions and designing research, not as assertions that have already been tested experimentally. In thinking about inner conflict and its implications for personality, we believe there are three chief reasons for taking into account the individual's moral needs. The first of these is that moral needs are so often a factor in *causing* conflict. It is true that a person may experience a conflict that does not involve internalized moral standards. He may be torn between a wish for gratification of some sort and an external danger, such as the prospect of parental disapproval. But external dangers can often be evaded, whereas, when the individual's own moral needs are opposed to his wishes, there is an internal danger of *self*-disapproval that cannot be dodged. In our society, if not in all societies, important conflicts commonly have internalized moral components.

The second reason for concerning ourselves with moral needs is that the *outcome* of conflict is largely determined by them. As a result of the moral forces within him, a person must either control himself, often distorting his perceptions defensively to cope with the tension he feels, or else he must suffer the guilt which will accompany a violation of his standards. If the moral needs are more powerful than the temptation, the person will inhibit himself, but having an unsatisfied wish, is likely to use defense mechanisms to allay the resulting tension. He will be able to avoid defending only if an adequate substitute satisfaction can be found, or if his personality organization is strong enough to stand the feeling of frustration (unfortunately, no one is this mature at all times). If the temptation is more pressing than the moral needs, the individual seeks gratification, but becomes guilty, and this too may lead to defense. In the latter case we speak of defense against guilt to distinguish the circumstance from defense against impulse. As students of personality, our second reason, then, for being interested in moral needs is that they motivate delay of gratification and the use of defenses, and they cause guilt.

Our third reason is that quite apart from determining the fact that defensive distortions are used, the moral aspects of personality cause individual differences in ways and frequency of defending—that is, in characteristic ways of resolving conflict. To put it another way, the nature of a person's moral needs affects what has often been called his "character structure." In the first place, of course, the particular impulses or guilts a person defends against are determined by the substantive content of his moral needs. One person tends to become disturbed and defend primarily because of the unacceptability to him of his hostile feelings or behaviors, another because of sexual wishes or sexual activities. The *frequency* of defense is affected by the height of the standards. If a person's standards in the area of aggression are so high as to forbid the expression of even a little bit of anger toward an authority figure, then every time that person's employer is irritating, the person will have to defend.

Another consideration in predicting frequency of defense is the breadth of the standards. If one must avoid anger not only toward father-figures but also toward mother-figures, brother-figures, cousin-figures, inferiors, children, and dogs, then there are many situations in which one may have to defend. Frequency of defense is influenced by still another aspect, the severity of the standards. The more intense the guilt a person will experience for a violation, the more likely he is to defend against the forbidden impulse, and if temptation overcomes him and infraction occurs, the more likely he will be to defend against guilt.

In addition to determining the content of the impulses or guilts defended against and to affecting the frequency of defense, the nature of the moral needs influences *which defenses are used*. Some defense mechanisms may be ruled out because they involve behaviors that are morally unacceptable to the individual. For instance, the defense of restriction of the ego (7) may be unavailable to a person who would define it is

"quitting." Some mechanisms may come to be used more readily because they are especially suited to warding off those particular impulses or guilts with which the individual is conc ned. Theorists (e.g., 7) have speculated that repression may be of particular value in coping with sexual desires, and other processes of distortion may be of more use against anger. Where height, breadth, or severity of a given standard necessitates frequent defense, those mechanisms will be more relied upon which afford a constant protection, although at the expense of a more lasting change in the personality. An example is "reaction formation" ("reactive alteration of the ego") (7). When this defense is used against anger, the person becomes incapable of the affect, even when it is appropriate to the situation. He is always kind, and the angrier he becomes unconsciously, the kinder he becomes on the surface. The more severe the internalized prohibitions, the more reaction formation will take on the generalized form of a character trait (4).

Thus, quite in addition to the intrinsic interest and importance of moral needs, the fact that they are so relevant for the theory of defense mechanisms and inner conflict argues that their investigation will pay dividends.

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